

THE FLORA OF OKTIBBEHA COUNTY, MISSISSIPPI

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ABSTRACT

We surveyed the flora of Oktibbeha County, Mississippi, U.S.A., from February 1994 to 1996. Occupying 118 square kilometers in east-central Mississippi, Oktibbeha County lies among 3 physiographic regions that include, from west to east, Interior Flatwoods, Pontotoc Ridge, and Black Prairie. Accordingly, the county harbors a diverse flora. Based on field work, as well as an extensive review of published literature and herbarium records at IBE and MISSA, we recorded a total of 1,148 taxa (1,125 species, 7 hybrids, 16 infraspecific taxa) belonging to 514 genera in 160 families; over 85% of all taxa documented were native. Compared to 3 other counties in east-central Mississippi, Oktibbeha County has the second largest recorded flora. The number of state-listed (endangered, threatened, or of special concern) taxa (67) documented in this survey far exceeds that reported from any other county in the region. Three introduced species, *Ilex cornuta* Lindl. & Paxton, *Mahonia bealei* (Fortune) Carrière, and *Nandina domestica* Thunb., are reported in a naturalized state for the first time from Mississippi. We also describe 16 different plant communities belonging to 5 broad habitat categories: bottomland forests, upland forests and prairies, aquatic habitats, seepage areas, and human-influenced habitats. A detailed description of the vegetation associated with each of these communities is provided.

RESUMEN

Hemos investigado la flora del condado de Oktibbeha, Mississippi, U.S.A., desde febrero de 1994 a 1996. Con 118 kilómetros cuadrados en el centro-este de Mississippi, el condado de Oktibbeha está entre 3 regiones fisiográficas que son, de oeste a este, Interior Flatwoods, Pontotoc Ridge, y Black Prairie. Consecuentemente, el condado alberga una flora diversa. Basados en el trabajo de campo, así como en una extensa revisión de la bibliografía publicada y pliegos de herbario depositado en IBE y MISSA, hemos recopilado un total de 1,148 taxa (1,125 especies, 7 híbridos, 16 taxa infraespecíficos) pertenecientes a 514 géneros de 160 familias; más del 85% de los taxa documentados fueron autóctonos. Comparado con otros 3 condados del centro-este de Mississippi, el condado de Oktibbeha tiene la segunda flora más numerosa. El número de taxa (67) listados para el estado (en peligro, amenazada, o de atención especial) documentados en este trabajo excede con mucho a los de cualquier otro condado de la región. Tres especies introducidas, *Ilex cornuta* Lindl. & Paxton, *Mahonia bealei* (Fortune) Carrière, y *Nandina domestica* Thunb., se citan en estado naturalizado por primera vez en Mississippi. También se describen 16 comunidades vegetales diferentes pertenecientes a 5 categorías de hábitat: bosques de tierras bajas, bosques de meseta y praderas, hábitats acuáticos, áreas de filtración, y hábitats influenciados por el hombre. Se aporta una descripción detallada de la vegetación asociada a cada una de estas comunidades.

ZUSAMMENFASSUNG

Wir untersuchten die Flora des Verwaltungsbezirks Oktibbeha im Bundesstaat Mississippi, Vereinigte Staaten von Amerika, im Zeitraum Februar 1994 bis 1996. Der Verwaltungsbezirk umfaßt 118

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Quadratkilometer im Mittelosten Mississippis und gehört, von West nach Ost, zu 3 physiographischen Regionen (Interior Flatwoods, Pontotoc Ridge und Black Prairie), weshalb die Flora sehr artenreich ist. Aufgrund unserer Freilandarbeit, sowie eines umfangreichen Studiums der Fachliteratur und zahlreicher Herbariumsbelege in IBE und MISSA, waren wir in der Lage 1.148 Taxa (1.125 Arten, 7 Hybriden und 16 Unterarten oder Varietäten) aus 514 Gattungen und 160 Familien zu katalogisieren. 85% aller Taxa waren in Mississippi beheimatet. Der Verwaltungsbezirk Oktibbeha hat im Vergleich zu 3 anderen Verwaltungsbezirken im Mittelosten Mississippis die zweitgrößte Flora. Die Anzahl der Arten auf der Roten Liste Mississippis (vom Aussterben bedroht oder von besonderem Belang) übersteigt mit 66 weit die aller anderen Verwaltungsbezirke in der Region. Drei eingeschleppte Arten, *Ilex cornuta* Lindl. & Paxton, *Mahonia bealei* (Fortune) Carrière und *Nandina domestica* Thunb. werden hier zum ersten Mal von Mississippi erwähnt. Im weiteren Verlauf beschreiben wir außerdem im Detail 16 verschiedene Pflanzengesellschaften in 5 Lebensraumkategorien: Auenwälder, Hochlandwälder und Prairien, Aquatische Lebensräume, Sickerstellen und vom Menschen beeinflusste Lebensräume.

INTRODUCTION

Unlike other areas in the southeastern United States, Mississippi is largely unexplored botanically (Duncan 1953; Pullen 1966; Bryson & Carter 1992; Bryson et al. 1996; Sorrie & Leonard 1999; Alford 2001). To date, there is no comprehensive flora for the state, although there are 8 public herbaria (DSC, HGCRIL, IBE, MISS, MISSA, MSCW, SWSL, University of Southern Mississippi) with combined holdings of more than 400,000 specimens (Holmgren et al. 1990). In addition, the Mississippi Museum of Natural Science (MMNS) maintains a herbarium of ca. 8,000 specimens, as well as a computer database of plant records, both of which are accessible to the public.

Historically, botanical explorations of Mississippi have been sporadic, and largely concentrated on the southern part of the state (Flint 1882a; Halsted 1891). The naturalist William Bartram traveled through parts of Mississippi in 1777 (Van Doren 1928), and the renowned botanist Thomas Nuttall reportedly collected plants around Natchez, Mississippi, in 1811 and 1820 (Graustein 1967). In 1840, John Claiborne began his exploration of the pine forests of southern Mississippi (McDaniel 1986); twenty years later, Hilgard (1860) published comments on the phytogeography of Mississippi. In the early twentieth century, Harper (1906, 1914) gave a superficial account of the pine barren vegetation of southern Mississippi based on his travels through that region. Lowe (1921) published the first checklist of vascular plants for the state.

In 1964, the Flora of Mississippi Project, funded by the National Science Foundation, was initiated by Samuel B. Jones, Jr., Thomas M. Pullen, and Ray Watson. A number of publications (Pullen et al. 1968a, 1968b; Jones et al. 1969; Watson 1969, 1970a, 1970b; Jones 1974a, 1974b, 1975a, 1975b, 1976a, 1976b) resulted, but the goal of a comprehensive floristic treatment was never achieved. A definitive treatment of the flora of Oktibbeha County has also been lacking so far, although floristic surveys have been performed for several Mississippi counties (Flint 1882b; Ferrari 1970; Morgan 1979; Meeks 1984; Morris 1987;

Winstead 1990; MacDonald 1996; Alford 2001), as well as other selected areas (Lassetter 1968; Massey 1974; Carter 1978; McCook 1982; Moore 1993). Hilgard (1860) stated: "With the Flatwoods of Octibbeha [sic] county, I am not personally acquainted," and the floristic literature for Oktibbeha County remains sparse. In the first published checklist of Mississippi plants, Lowe (1921) cites several vascular plant collections from Oktibbeha County, among them many species considered rare today by the Mississippi Natural Heritage Program (MNHP). However, the first botanical work dealing explicitly with the flora of Oktibbeha County was a survey of liver- and hornworts (Woods 1964). In recent years, some of the rare plant communities found in Oktibbeha County have been studied (Morris et al. 1993; Leidolf & McDaniel 1998).

The objectives of this study were to develop an annotated checklist of vascular plants and bryophytes (excluding Bryopsida) for Oktibbeha County. In addition, we wanted to provide information on habitat association and abundance of the plant species included in this checklist. In doing so, we hope to establish a botanical baseline for ecological research in this area, while at the same time making an important contribution to the recently revived Flora of Mississippi Project (e.g., Bryson & Carter 1992).

STUDY AREA

Location and Description of Oktibbeha County

Oktibbeha County is located in east-central Mississippi, approximately 200 km northeast of the state capital Jackson, and ca. 60 km west of the Mississippi-Alabama state line. It covers an area of approximately 118 km², and is bordered by 6 other counties: Lowndes County to the east, Winston and Noxubee Counties to the south, Webster and Choctaw Counties to the west, and Clay County to the north (Fig. 1). The county seat of Starkville is located 10 km northeast of the geographic center of Oktibbeha County, at the junction of State Highway 25 and U.S. Highway 82. Mississippi State University (MSU) and the Mississippi Agricultural and Forestry Experiment Station are located 2.5 km east of Starkville (Fig. 1). Starkville is the largest town in Oktibbeha County, followed by Maben and Sturgis (Brent 1973).

Climate

The climate of Oktibbeha County is warm and humid, and influenced by the subtropical latitude, the extensive landmass to the north, and the warm temperatures of the Gulf of Mexico (Brent 1973). Annual precipitation averages 141.86 cm, with monthly precipitation ranging from 8.23 cm in October to 15.24 cm in March (Table 1). Winter and spring are the wettest seasons of the year, with fall being the driest. Snow is rare and remains on the ground for short durations only (Brent 1973). Temperatures in Oktibbeha County range from an average low of 5.2°C in January to an average high of 27.0°C in July (Table 1). The average annual number of frost-free days (above 0°C) is 226 (Brent 1973).

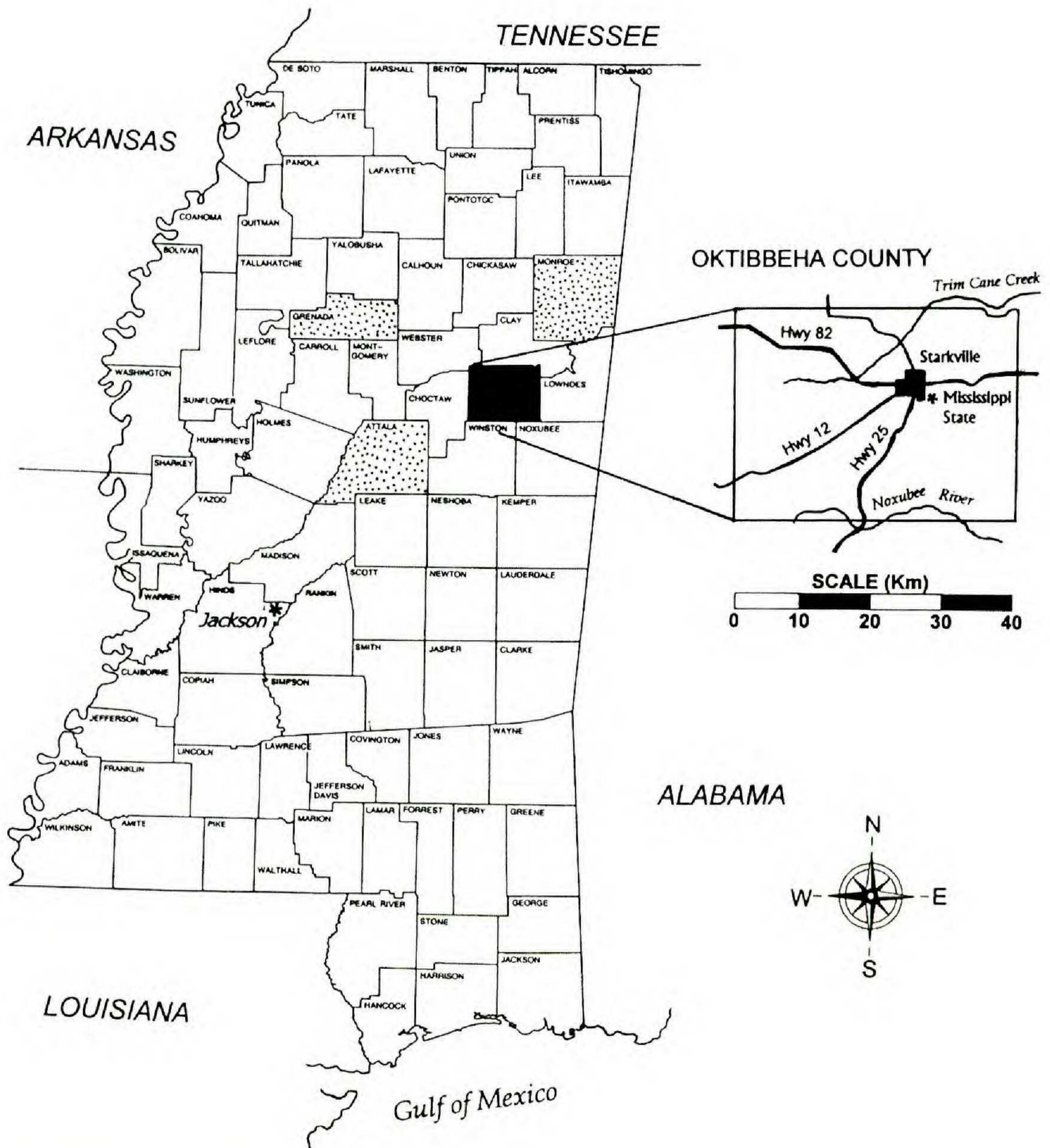


FIG. 1. Map of Mississippi, showing counties, and general location of study area and areas with which comparisons are made. Enlargement shows study area, Oktibbeha County.

Topography, Physiography, Geology, and Soils

Oktibbeha County is located within the Hilly Coastal Plain physiographic province (Fenneman 1938), a predominantly pine (*Pinus* spp.)-covered region in the southeastern United States. Elevation in the county ranges from 50 m a.s.l. in the Tibbe Creek floodplain in the northeastern corner of the county to 180 m a.s.l. in the southwestern corner of the county. The county is mapped on the 7.5' series U.S. Geological Survey topographic maps Artesia, Bluff Lake, Bradley, Cedar Bluff, Crawford West, Double Springs, Longview, Maben, Pheba, Starkville, Sturgis, and West Point. Oktibbeha county is drained into the Tombigbee River

TABLE 1. Climate data for Oktibbeha County, Mississippi, based on data from the U.S. Department of Agriculture, Natural Resources Conservation Service, National Water and Climate Center, for West station, 1961–1990.

Month	Temperature (°C)			Avg. rainfall (cm)
	Avg. daily maximum	Avg. daily minimum	Average daily	
January	10.7	-0.5	5.2	13.51
February	13.4	1.6	7.4	12.40
March	18.4	6.2	12.3	15.24
April	23.6	11.0	17.3	14.43
May	27.6	15.4	21.5	11.76
June	31.3	19.5	25.4	9.52
July	32.8	21.3	27.0	12.55
August	32.6	20.7	26.6	8.58
September	29.6	17.6	23.6	9.78
October	24.2	10.7	17.4	8.23
November	18.4	6.2	12.3	10.80
December	12.8	1.5	7.2	15.06
Total:	22.9	10.9	16.9	141.86

by two major drainage systems: the Tibbe Creek system, which includes Sun Creek, Trim Cane Creek, Sand Creek, and Catalpa Creek, drains the northern half of the county; in the southern part of the county, the Noxubee River and its tributaries drain southeastward into the Tombigbee River (Fig. 1, Brent 1973).

Oktibbeha County is situated among three physiographic regions (Fig. 2). The eastern part of the county extends into the Black or Northeastern Prairie Region. Vegetation in this region is influenced by alkaline soils derived from underlying chalk of Upper Cretaceous age, including Demopolis, a bedded chalk consisting primarily of calcite, with small additions of montmorillonitic clay, mica, and sand; and Prairie Bluff, a mixture of bedded chalk and calcareous sandstone (Brent 1973). To the west, the Black Prairie is bordered by the Pontotoc Ridge; here, the Prairie Bluff chalk is, on the highest points, overlain with red clays derived from the Ripley formation, also of Upper Cretaceous age and made up of calcareous sands and clays (Brent 1973). The western portion of the county lies within the Interior Flatwoods, a 5 to 20 km wide band of level to slightly hilly lands (Hilgard 1860). This region was formed from geologic formations of Tertiary age, which include Clayton, a heterogenous formation consisting of sand, calcareous sandstone, chalk conglomerate, clay, or marl; Porters Creek, made up of montmorillonitic clays; Wilcox, a formation consisting of quartz sand, silty clay, bauxitic clay, and clay-ball conglomerates; and Naheola. In addition to these substrates, recent alluvial deposits, as well as older terrace deposits, may be found in the stream valleys and flood plains (Brent 1973).

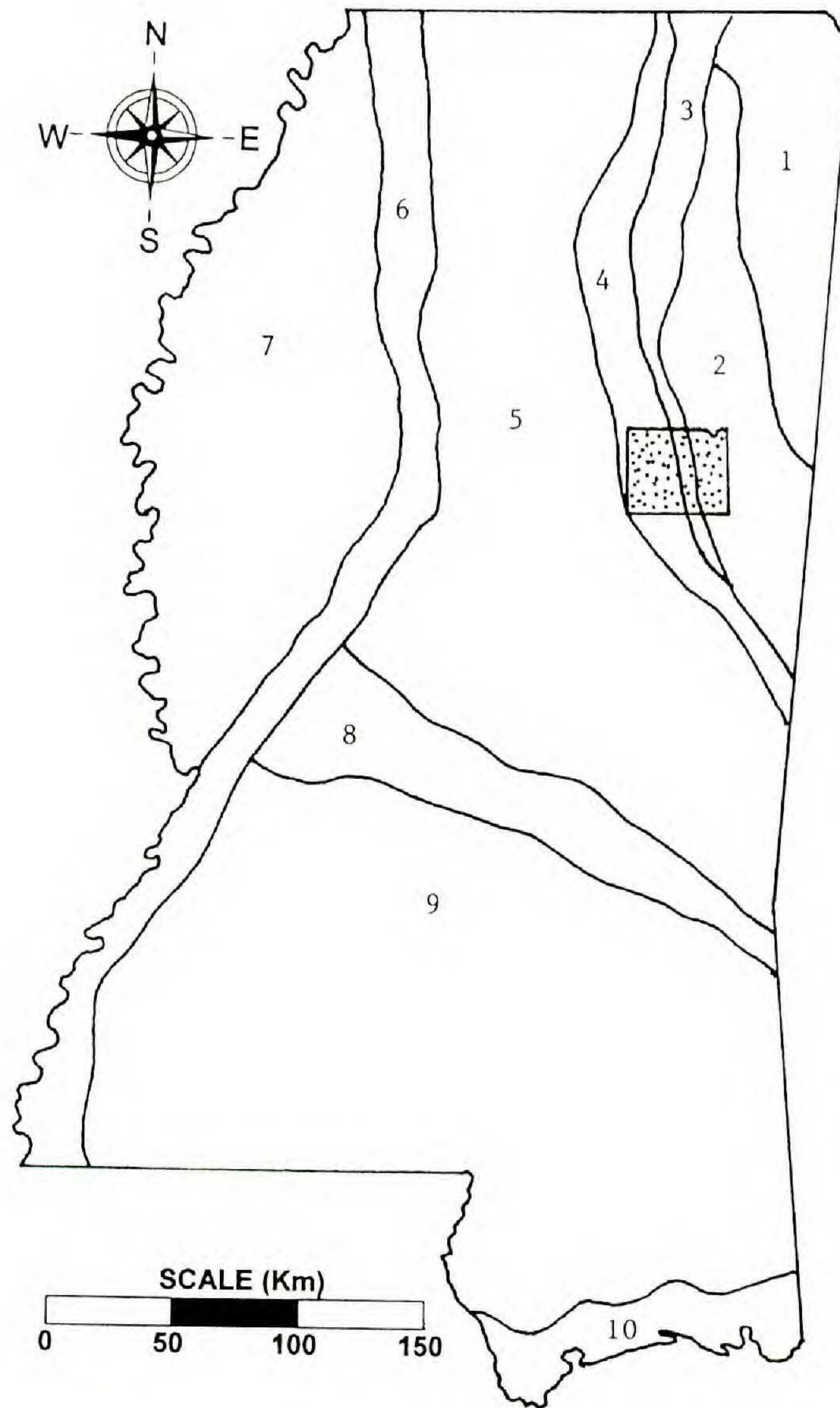


FIG. 2. Map of Mississippi, showing location of study area Oktibbeha County and Mississippi physiographic regions. 1 = Tennessee River Hills 2 = Black Prairie 3 = Pontotoc Ridge 4 = Interior Flatwoods 5 = North Central Plateau 6 = Loess Bluff Hills 7 = Mississippi Alluvial Valley (Yazoo-Mississippi Delta) 8 = Jackson Prairie 9 = Longleaf Pine Belt 10 = Coastal Pine Meadows (after Lowe 1921).

The soils found in Oktibbeha County have been grouped into 10 soil associations (Brent 1973). Three associations consisting of nearly level, somewhat poorly to moderately well-drained soils, occur in floodplains in the Black Prairie (Leeper-Marietta-Catalpa) and the Interior Flatwoods (Mathiston-Urbo, Mantachie-Mathiston-Ochlockonee) physiographic regions. The remaining 7 associations are found on uplands. The most prominent upland soil association in the Black Prairie is the Kipling-Savannah-Oktibbeha Association, which covers 21% of the county and consists of somewhat poorly to moderately well-drained soils with clayey subsoils or moderately well-drained soils with loamy

subsoils and a fragipan. The Kipling-Sumter-Gullied Land Association, made up of somewhat poorly drained to well-drained soils with clayey subsoils developed from chalk that are severely gullied in some areas, is another interesting soil association of the Black Prairie: although it covers only 4% of the county, it is of botanical interest because of the chalk outcrops it includes. Prominent upland soil associations of the Interior Flatwoods physiographic province include the Longview-Falkner-Prentiss Association, which consists of somewhat poorly to moderately well-drained soils with loamy to clayey subsoils and covers 25% of the county, and the Stough-Prentiss-Myatt Association, which is made up of poorly to moderately well-drained soils with loamy subsoils and covers 8% of the county. The narrow ridgetops and sidelopes in the extreme western portion of Oktibbeha County are dominated by the Maben-Ruston-Savannah Association, consisting of moderately well- to well-drained soils with loamy subsoils (Brent 1973).

Presettlement Vegetation

The first white settlers did not arrive in the area of present-day Oktibbeha County until 1820, when Presbyterian missionaries built a mission in Mayhew. Oktibbeha County was created through an act of the state legislature on 23 December 1833, after the land had been acquired from the Choctaw Indians in the Treaty of Dancing Rabbit Creek on 27 September 1830 (Brent 1973). By the 1840 census, 4,276 people lived in Oktibbeha County, of which 1,702 were engaged in agriculture (U.S. Census Bureau 1840). The best available information on pre- and early settlement vegetation in the area comes from Hilgard's (1860) seminal report on the phytogeography of Mississippi, which was based on his travels through the state in the early to mid-1850's. Although Hilgard (1860) did not visit Oktibbeha County, his comments on the Prairie Belt of neighboring Lowndes County, as well as on the Flatwoods of neighboring Chickasaw, Calhoun, and Choctaw Counties (which, at the time, included present-day Clay and Webster Counties) provide a reasonable estimate of Oktibbeha County's early settlement vegetation. At the time, Oktibbeha County had a population of 9,171, with 20% of its land area (23,655 ha) in improved farmland, distributed among 560 farms (U.S. Census Bureau 1850). However, it is likely that most of this farmland, and therefore, most of the population, was concentrated in the Black Prairie part of the county, with the Interior Flatwoods "... thus far but thinly settled ..." (Hilgard 1860:281).

Based on Hilgard's observations, it is apparent that presettlement vegetation of the Black Prairie was dominated by grasslands, which were "... level, or very gently undulating tracts, possessing a deep black, heavy soil, on which timber is very much scattered or altogether wanting ..." (Hilgard 1860:261). Chalk outcrops were already an important component of the landscape at the time, "... forming 'bald prairies' and 'bald hilltops'—in which the limestone is too close

to the surface to allow of the growth of trees or other deep rooted plants, and not unfrequently forms white areas many acres across in extent, strewn with fossils (especially oysters) washed out of the mass, and only here and there a patch of *Verbena* [probably *V. bipinnatifida* and *V. simplex*], or *Cassia* (*C. obtusifolia*, *occidentalis*, *marilandica*)." (Hilgard 1860:77). Interspersed with these tracts of open prairie and chalk outcrops were "... tracts of a more rolling surface, mostly with shallow, pale, light soil, timbered with the common upland Oaks—Spanish ("Red") [*Quercus falcata*], Post [*Q. stellata*], Black Jack [*Q. marilandica*], and sometimes Red and Black ("Black") [*Q. velutina*] and Scarlet ("Spanish") Oak [*Q. coccinea*]..." (Hilgard 1860:261). Hilgard's (1860) statements regarding Black Prairie vegetation are echoed by Lowe (1921:32): "The region has a gently rolling surface, and was originally prairies, having only here and there scattered patches of trees, except on the stream bottoms, which supported heavy growths of timber. This Prairie Belt is now largely in cultivation, but some timber remains in the bottoms."

Little can be said regarding the presettlement vegetation of the Pontotoc Ridge in Oktibbeha County. Hilgard (1860) crossed the Pontotoc Ridge far to the north of Oktibbeha County, so his observations may not be entirely representative. However, speaking of the Pontotoc Ridge in general, he referred to it as a "... narrow belt of fertile land underlaid [sic] by marl beds" (Hilgard 1860:266), and further commented on the variable nature of the Pontotoc Ridge vegetation, which ranges from open prairie-like communities in calcareous areas to mesophytic upland hardwood forests on moist, north-facing exposures and xeric upland hardwood forests on sandstone ridges. Lowe (1921:35) noted that the red soils of the Pontotoc Ridge "... support a rich growth ..." and that "[t]he plants of the Pontotoc Ridge present decided differences from those of the prairies lying to the east, and the tertiary flatwoods on the west."

Presettlement vegetation of the Interior Flatwoods in the western part of Oktibbeha County likely consisted of upland hardwood forest dominated by *Quercus stellata* Wangenh., *Q. marilandica* Muenchh., and *Pinus* spp., with *Liriodendron tulipifera* L. common on sideslopes and in hollows. *Vaccinium* spp. was abundant in the understory; herbaceous ground cover was sparse. Moving east and south into the Interior Flatwoods, these upland species were gradually replaced by *Quercus alba* L., *Q. falcata* Michx., *Q. rubra* L., and *Carya* spp., with the ground "... covered with a fine growth of grass." (Hilgard 1860:280-282).

Land Use, Present-day Vegetation, and Disturbance

Prior to 1923, most (> 75%) of Oktibbeha County had been farmed at one time or another, with the main crop being cotton (*Gossypium* sp.; U.S. Census Bureau 1920, Brent 1973). As recent as 1964, 67% of the county's land area was farmland (Brent 1973); today, in part due to such government programs as the Conservation Reserve Program (U.S. Department of Agriculture [USDA] Farm Ser-

vice Agency) and the Stewardship Incentives Program (USDA Forest Service), forestry and recreation have supplanted agriculture as the primary land uses in the county. As of 1997, there were 329 farms covering 35,000 ha, or 30% of Oktibbeha County (USDA National Agricultural Statistics Service [NASS], <http://www.nass.usda.gov>). On the other hand, forest land now makes up 64% of the county, with 28% pine, 58% hardwood, and 14% mixed forest (Mississippi Forestry Commission, <http://www.mfc.state.ms.edu>). The John W. Starr Memorial Forest and Noxubee National Wildlife Refuge (NWR), which represent extensive areas of forested land and provide a variety of recreational opportunities, are partially located in Oktibbeha County. The remainder of the county is urban land.

With the exception of the John W. Starr Memorial Forest and Noxubee NWR, most areas of the county have been heavily impacted by anthropogenic disturbance, including agriculture and forestry, and the condition of the vegetation is correspondingly poor. Disturbance from agriculture is most evident in the Black Prairie physiographic region, with much of the native prairie vegetation having been replaced by crop- and pasture land. Despite the fact that a sizeable percentage of land has been taken out of cultivation over the last decades, these lands have shown a tendency to grow up in trees rather than returning to their original grassland vegetation (Lowe 1921, Leidolf & McDaniel 1998). Furthermore, the few remnant prairies that remain today are subject to a combination of anthropogenic and natural disturbances, including exotic species invasions, recreation, and erosion.

Disturbance from forest operations is a major factor affecting the vegetation of the Interior Flatwoods. This is especially true for privately owned forest land, where management appears to be driven primarily by economic considerations; accordingly, treatments are often severe, with minimal rotation lengths. On the John W. Starr Memorial Forest and Noxubee NWR, forest management more closely mimics natural processes and generally follows Mississippi Best Management Practices that attempt to minimize the effect of forest operations on land condition.

METHODS

We made vascular plant and bryophyte collections from February 1994 to 1996. Collecting trips were conducted on a regular basis, at an average rate of one trip per week, covering all parts of Oktibbeha County. We processed all collections using standard field and herbarium techniques (Blake 1932; Smith 1971; Jones & Luchsinger 1986). Field notes included information on habitat, species association, relative abundance, and natural history/ecology. Whenever possible, we collected duplicate vouchers, except in the case of rare species. A complete set of voucher specimens has been deposited at IBE, with partial sets distributed to

BRIT, FR, UTC, and the Mississippi State University College of Forest Resources Herbarium (MSUSFR).

After completion of field work, we conducted a complete herbarium review of existing records at IBE and MISSA. All other herbaria in the state were judged to have too few specimens from Oktibbeha County to warrant close attention. Specimens from Oktibbeha County were verified and annotated. Where available, we incorporated label information on physiographic region, habitat of occurrence, and relative abundance into our annotated checklist. We examined 710 specimens in this manner. We also reviewed pertinent literature and published checklists for records from Oktibbeha County and, after critical evaluation, incorporated them into the checklist. Since the specimens upon which the reports are based were usually not seen, only the reference is provided.

Sources used for identification and verification of specimens, as well as for nomenclatural reference, included Allen (1992), Bailey and Bailey (1976), Barkworth et al. (In preparation), Britton and Brown (1970), Burkhart (1969), Correll and Johnston (1970), Cronquist (1980), Davenport (1988), Godfrey and Wooten (1979, 1981), Great Plains Flora Association (1986), Hitchcock (1951), Isley (1990), Krüssmann (1977), Lellinger (1985), Morris (1989), Radford et al. (1968), Shinnars (1962), and Steyermark (1963). Where used, herbarium acronyms follow Holmgren et al. (1990). Abbreviations of botanical journals follow Bridson and Smith (1991).

RESULTS AND DISCUSSION

General

We documented 1,148 plant taxa (1,125 species, 7 hybrid taxa, and 16 infraspecific taxa) from Oktibbeha County, belonging to 160 families and 514 genera. Of these taxa, 976 (85%) are native (Table 2). Seventeen families are represented by 5 genera or more (Table 3); 46 genera are represented by 5 taxa or more (Table 4). Noteworthy collections include 3 introduced species documented in a naturalized state from Mississippi for the first time: *Ilex cornuta* Lindl. & Paxton, *Mahonia bealei* (Fortune) Carrière, and *Nandina domestica* Thunb. [The last species has since been reported from Amite County, Mississippi (Alford 2001)]. All 3 species are used frequently for landscaping by MSU and were encountered in a mesophytic upland hardwood forest in the Pontotoc Ridge physiographic region adjacent to campus. Given the common characteristics of their seeds (all 3 species produce fleshy berries readily consumed by birds [Dirr 1990]), animals, specifically birds, represent the most likely dispersal vector.

Compared to 3 other counties in east-central Mississippi, Oktibbeha County has the second largest documented vascular flora. It has 17% and 11% more vascular plant taxa than Attala (Winstead 1990) and Grenada County (Morris 1987), respectively, and 14% less vascular plant taxa than Monroe County (MacDonald 1996). Compared to these 3 counties, Oktibbeha County has the highest species

TABLE 2. Taxonomic summary for the checklist of plants of Oktibbeha County, Mississippi.

Division/Class ^a	Families ^b	Genera ^b	Native	Species and lesser taxa ^c	
				Introduced	Total
Bryophyta ^d	12	14	22	0	22
Hepaticopsida	11	13	21	0	21
Anthocerotopsida	1	1	1	0	1
Equisetophyta	0	0	0	0	0
Lycopodiophyta	2	3	5	0	5
Polypodiophyta	10	12	14	1	15
Pinophyta	3	3	4	0	4
Magnoliophyta	133	482	931	171	1102
Magnoliopsida	105	368	624	114	738
Liliopsida	28	114	307	57	364
Total	160	514	976	172	1148

^a Nomenclature follows Flora of North America Editorial Committee (1993).

^b Counts are based on families and genera as recognized by Brummitt (1992).

^c Counts are based on species and lesser taxa as recognized by Kartesz (1994) and Barkworth et al. (In preparation).

^d Bryopsida was not included in this study.

TABLE 3. Plant families^a in Oktibbeha County, Mississippi, represented by ≥ 5 genera^b (in decreasing order of importance; followed by number of species and lesser taxa^c in parentheses).

Asteraceae–57 (140)	Lamiaceae–14 (24)	Cyperaceae–8 (100)	Euphorbiaceae–5 (19)
Poaceae–56 (159)	Brassicaceae–13 (20)	Boraginaceae–6 (10)	Malvaceae–5 (7)
Fabaceae–36 (75)	Rosaceae–13 (28)	Caryophyllaceae–6 (8)	
Scrophulariaceae–20 (34)	Rubiaceae–10 (22)	Ranunculaceae–7 (21)	
Apiaceae–19 (24)	Orchidaceae–9 (17)	Caprifoliaceae–5 (6)	

^a Nomenclature follows Brummitt (1992).

^b As recognized by Brummitt (1992).

^c As recognized by Kartesz (1994) and Barkworth et al. (In preparation).

richness in 5 out of 20 representative flowering plant families; for an additional 11 families, Oktibbeha County ranks second in species richness (Table 5). The 1,103 species of vascular plants documented from Oktibbeha County comprise 38.7% of all vascular plant species known to occur in Mississippi (USDA, Natural Resources Conservation Service [NRCS] Plants database, <http://plants.usda.gov>).

Rare/Protected Species

Oktibbeha County features a large number of rare and protected species. Sixty-seven species are currently listed as sensitive (MNHP 2002a, 2002b; Table 6), far exceeding the number of state-listed species reported from 3 other counties in east-central Mississippi (Table 5). Statewide, Oktibbeha County ranks 4th in the number of sensitive species, after Jackson, Tishomingo, and Perry Counties

TABLE 4. Plant genera^a in Oktibbeha County, Mississippi, that are represented by ≥ 5 taxa^b (in decreasing order of importance).

<i>Carex</i> -57	<i>Carya</i> -10	<i>Silphium</i> -7	<i>Lactuca</i> -5
<i>Dichanthelium</i> -24	<i>Hypericum</i> -10	<i>Smilax</i> -7	<i>Poa</i> -5
<i>Juncus</i> -17	<i>Polygonum</i> -9	<i>Spiranthes</i> -7	<i>Rhus</i> -5
<i>Quercus</i> -17	<i>Trifolium</i> -9	<i>Sporobolus</i> -7	<i>Rhynchospora</i> -5
<i>Cyperus</i> -15	<i>Asclepias</i> -8	<i>Verbena</i> -7	<i>Rubus</i> -5
<i>Paspalum</i> -15	<i>Galium</i> -8	<i>Agalinis</i> -6	<i>Rumex</i> -5
<i>Aster</i> -14	<i>Helianthus</i> -8	<i>Fimbristylis</i> -6	<i>Scirpus</i> -5
<i>Solidago</i> -12	<i>Panicum</i> -8	<i>Ludwigia</i> -6	<i>Sisyrinchium</i> -5
<i>Desmodium</i> -11	<i>Crataegus</i> -7	<i>Vicia</i> -6	<i>Vaccinium</i> -5
<i>Eragrostis</i> -11	<i>Eleocharis</i> -7	<i>Amaranthus</i> -5	<i>Viola</i> -5
<i>Eupatorium</i> -11	<i>Lespedeza</i> -7	<i>Chamaesyce</i> -5	
<i>Ranunculus</i> -11	<i>Oenothera</i> -7	<i>Euphorbia</i> -5	

^a Nomenclature follows Brummitt (1992).

^b As recognized by Kartesz (1994) and Barkworth et al. (In preparation).

(MMNS database, June 2002). Four species are also listed as either threatened or rare by the USDA Forest Service (Kral 1983, Table 6); of these, *Apios priceana* B.L. Rob. is currently the only species listed as federally threatened (5 January 1990, 55 FR 433) under the Endangered Species Act (16 USCS §1531 et seq.). Nineteen species in the families Araliaceae, Cactaceae, and Orchidaceae are also afforded special protection as Appendix II species under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (27 UST 1087; TIAS No. 8249; Table 6). The most significant discovery in the category of rare and protected species is that of a small population of *Alisma subcordatum* Raf. at Oktibbeha County Lake, a plant species previously considered to be of only historical occurrence in Mississippi.

Plant Communities

We recognized 16 different plant communities that can be grouped into 5 broad categories: bottomland forests, upland forests and prairies, aquatic communities, seepage areas, and human-influenced communities.

BOTTOMLAND FORESTS

Bottomland forests are formed by alluvial processes of erosion and sediment deposition that result in diverse topographical formations such as ridges, sloughs, flats, and terraces. Topographical variation results in a variety of flooding regimes; thus, small differences in topography effect large differences in edaphic conditions, and the resulting differences in plant associations are obvious. The two main types of bottomland forest we recognized, bottomland hardwood forest and swamp forest, owe their respective plant communities primarily to differences in flooding regime. Because Oktibbeha County lacks major streams, the extent of bottomland sites is limited.

TABLE 5. Species richness of selected taxonomic groups in 4 counties of east-central and north-central Mississippi.

Taxon ^a	Attala Co. ^b	Grenada Co. ^c	Monroe Co. ^d	Oktibbeha Co.
Bryophyta	91	N/A ^e	51	N/A ^f
Anthocerotopsida	1	N/A ^e	1	1
Hepaticopsida	24	N/A ^e	12	21
Bryopsida	66	N/A ^e	38	N/A ^f
Equisetophyta	1	2	1	0
Lycopodiophyta	4	2	4	5
Polypodiophyta	19	19	19	15
Pinophyta	5	4	4	4
Magnoliophyta	916	969	1253	1079
Magnoliopsida	643	661	871	731
Apiaceae	17	23	32	24
Asteraceae	107	116	156	137
Brassicaceae	9	10	21	20
Ericaceae	9	7	12	7
Euphorbiaceae	12	11	21	19
Fabaceae	67	70	85	74
Fagaceae	23	21	24	18
Hypericaceae	10	9	13	12
Juglandaceae	10	12	12	11
Lamiaceae	22	24	28	23
Polygonaceae	14	15	17	15
Ranunculaceae	13	12	25	20
Rosaceae	34	27	40	28
Rubiaceae	16	15	22	22
Scrophulariaceae	24	26	29	34
Liliopsida	273	308	382	348
Cyperaceae	79	90	112	98
Juncaceae	12	14	18	19
Liliaceae (sensu lato ^g)	27	23	32	36
Orchidaceae	16	19	17	17
Poaceae	98	121	146	146
Total:	1036	N/A^e	1332	N/A^f
Total (vascular only):	945	996	1281	1103
State-listed species^h:	13	42	50	67

^aNomenclature follows Brummitt (1992), Flora of North America Editorial Committee (1993), and Barkworth et al. (In preparation).—^bWinstead (1990).—^cMorris (1987).—^dMacDonald (1996).—^eDid not assess Bryophyta; therefore, a comparison can not be made with other counties.—^fDid not assess Bryopsida; therefore, a comparison can not be made with other counties.—^gIncluding Alliaceae, Amaryllidaceae, Asparagaceae, Convallariaceae, Hemerocallidaceae, Hyacinthaceae, Hypoxidaceae, Liliaceae, Melanthiaceae, Smilacaceae, and Trilliaceae.—^hMississippi Natural Heritage Program (2002a, 2002b); Mississippi Museum of Natural Science database (June 2002).

TABLE 6. Rank/status of protected plant species known to occur in Oktibbeha County, Mississippi.

Species ^a	MNHP Rank ^b		ESA ^c	CITES ^d	USDA ^e
	State	Global			
<i>Aesculus glabra</i> Willd.	S2?	G5			
<i>Agalinis pseudaphylla</i> (Pennell) Shinnery	S2	G1G2			T
<i>Alisma subcordatum</i> Raf.	SH	G4G5			
<i>Amphiachyris dracunculoides</i> (DC.) Nutt.	S1	G4G5			
<i>Apios priceana</i> B.L. Rob.	S1	G2	T		R
<i>Armoracia lacustris</i> (A. Gray) Al-Shehbaz & Bates	S1S2	G4?			
<i>Asarum canadense</i> L.	S2S3	G5			
<i>Asclepias hirtella</i> (Pennell) Woodson	S2	G5			
<i>Asclepias purpurascens</i> L.	S1	G4G5			
<i>Aster ericoides</i> L.	S2	G5			
<i>Astragalus canadensis</i> L. var. <i>canadensis</i>	S2	G5			
<i>Bouteloua curtipendula</i> (Michx.) Torr. in Marcy	S3S4	G5			
<i>Camassia scilloides</i> (Raf.) Cory	S2S3	G4G5			
<i>Carex gracilescens</i> Steud.	S2S3	G5?			
<i>Carex jamesii</i> Schwein.	S1S2	G5			
<i>Carex laxiflora</i> Lam.	S1	G5?			
<i>Carex meadii</i> Dewey	S3S4	G4G5			
<i>Carex microdonta</i> Torr. & Hook.	S2?	G4			
<i>Carex stricta</i> Lam.	S2	G5			
<i>Carya laciniosa</i> (F. Michx.) G. Don	S2S3	G5			
<i>Carya leiodermis</i> Sarg.	S2S3	G5			
<i>Coelorachis cylindrica</i> (Michx.) Nash	S1	G4G5			
<i>Corallorhiza wisteriana</i> Conrad				II	
<i>Crataegus calpodendron</i> (Ehrh.) Medik.	S?	G5			
<i>Dasistoma macrophylla</i> (Nutt.) Raf.	S3S4	G4			
<i>Delphinium tricornis</i> Michx.	S2	G5			
<i>Dodecatheon meadia</i> L.	S2	G5			
<i>Echinacea purpurea</i> (L.) Moench	S3S4	G4			
<i>Erythronium albidum</i> Nutt.	S2	G5			
<i>Evax prolifera</i> Nutt. ex DC.	S1	G5			
<i>Evonymus atropurpureus</i> Jacq.	S2S3	G5			
<i>Frasera caroliniensis</i> Walter	S2S3	G5			
<i>Fraxinus quadrangulata</i> Michx.	S2	G5			
<i>Hexalectris spicata</i> (Walter) Barnhart	S2	G5		II	
<i>Hybanthus concolor</i> (T.F. Forst.) Spreng.	S2	G5			
<i>Juncus filipendulus</i> Buckley	S3S4	G5			
<i>Lilium superbum</i> L.	S3S4	G5			
<i>Linum sulcatum</i> Riddell	S3S4	G5			
<i>Listera australis</i> Lindl.				II	
<i>Lobelia appendiculata</i> A.DC.	S2S3	G4G5			
<i>Malaxis unifolia</i> Michx.				II	
<i>Menispermum canadense</i> L.	S3S4	G5			
<i>Muhlenbergia glabriflora</i> Scribn.	S?	G4?			
<i>Nemastylis geminiflora</i> Nutt.	S2	G4			

Species ^a	MNHP Rank ^b		ESA ^c	CITES ^d	USDA ^e
	State	Global			
<i>Neptunia lutea</i> (Leavenw.) Benth.	S3S4	G5			
<i>Oenothera triloba</i> Nutt.	SU	G4			
<i>Onosmodium molle</i> Michx. ssp. <i>hispidissimum</i> (Mack.) B. Boivin					R
<i>Ophioglossum engelmannii</i> Prantl	S1	G5			
<i>Opuntia humifusa</i> (Raf.) Raf.				II	
<i>Osmorhiza longistylis</i> (Torr.) DC.	S3	G5			
<i>Panax quinquefolius</i> L.	S3	G3G4		II	
<i>Penstemon tenuiflorus</i> Pennell	S2S3	G3?			
<i>Perideridia americana</i> (Nutt. ex DC.) Reichenb.	S1S2	G4			
<i>Platanthera ciliaris</i> (L.) Lindl.				II	
<i>Platanthera clavellata</i> (Michx.) Luer				II	
<i>Platanthera cristata</i> (Michx.) Lindl.	S3	G5		II	
<i>Polytaenia nuttallii</i> DC.	S2	G5			
<i>Ponthieva racemosa</i> (Walt.) C. Mohr	S2?	G4G5		II	
<i>Prenanthes aspera</i> Michx.	S2	G4?			
<i>Ptelea trifoliata</i> L.	S3S4	G5			
<i>Quercus macrocarpa</i> Michx.	S2	G5			
<i>Rhamnus lanceolata</i> Pursh	S2	G5			
<i>Sedum pulchellum</i> Michx.	S1	G5			
<i>Spiranthes cernua</i> (L.) Rich.				II	
<i>Spiranthes lacera</i> (Raf.) Raf.	S3S4	G5		II	
<i>Spiranthes magnicamporum</i> Sheviak	S2S3	G4		II	
<i>Spiranthes ovalis</i> Lindl.	S2S3	G5?		II	
<i>Spiranthes praecox</i> (Walt.) S. Watson				II	
<i>Spiranthes tuberosa</i> Raf.				II	
<i>Spiranthes vernalis</i> Engelm. & A. Gray				II	
<i>Staphylea trifolia</i> L.	S3	G5			
<i>Taenidia integerrima</i> (L.) Drude	S1	G5			
<i>Thalictrum debile</i> Buckley	S1S2	G2			R
<i>Tipularia discolor</i> (Pursh) Nutt.				II	
<i>Tomanthera auriculata</i> (Michx.) Raf.	S1	G3			
<i>Triosteum angustifolium</i> L.	S3	G5			
<i>Triphora trianthophora</i> (Sw.) Rydb.	S2S3	G3G4		II	
<i>Ulmus serotina</i> Sarg.	S3?	G4			
<i>Uvularia floridana</i> Chapm.	S1	G3			

^aNomenclature follows Kartesz (1994) and Barkworth et al. (In preparation).—^bMississippi Natural Heritage Program (2002a, 2002b) rank: Critically imperiled globally (G1), imperiled globally (G2), rare and local throughout range, found locally in a restricted range, or vulnerable to extinction (G3), apparently secure globally, but may be rare in parts of its range (G4), demonstrably secure globally (G5), with “?” indicating uncertainty about or inexactness of a rank. State (S) ranks are same as global ranks, except in that “state” is substituted for “global”, with SH, SU, and S? indicating historical occurrence but suspected to be extant, uncertain rank, and unranked, respectively.—^cEndangered Species Act, 16 USCS §1531 et seq. T= threatened species, i.e., a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.—^dConvention on

1. *Bottomland hardwood forests*.—Bottomland hardwood forests in Oktibbeha County are found primarily in the Interior Flatwoods physiographic region, where they occur on seasonally flooded sites associated with creeks and minor streams. The high foliage volume of these forests gives credence to their reputation for high productivity. Depending on mode of establishment and disturbance history (e.g., logging), bottomland hardwood forests in Oktibbeha County may have multiple layers, including overstory, midstory (subcanopy), and woody and herbaceous understory layers (the latter may be weakly developed or lacking in forests subject to recent logging); however, due to variations in tree height and extensive growth of such lianas as *Rhus radicans* L., *Bignonia capreolata* L., *Ampelopsis* spp., *Parthenocissus quinquefolia* (L.) Planch., *Vitis* spp., and *Smilax* spp., stratification may not be readily apparent at any given site. In addition to the vegetation layers already mentioned, unique and locally important features include palmetto [*Sabal minor* (Jacq.) Pers.] thickets and dense cane [*Arundinaria gigantea* (Walter) Muhl.] brakes.

The overstory of bottomland hardwood forests is generally dominated by oaks (*Quercus* spp.) with species composition depending on moisture. From wet to dry, dominants include *Q. lyrata* Walter, *Q. michauxii* Nutt., *Q. nigra* L., *Q. phellos* L., and *Q. pagoda* Raf. Co-dominants include *Q. alba* L., *Q. falcata* Michx., *Q. laurifolia* Michx., *Q. rubra* L., *Q. shumardii* Buckley, *Q. stellata* Wangerh., *Q. texana* Buckley, *Fagus grandifolia* Ehrh., *Liquidambar styraciflua* L., *Carya carolinae-septentrionalis* (Ashe) Engl. & Graebn., *C. cordiformis* (Wangerh.) K. Koch, *C. glabra* (Mill.) Sweet, *C. ovalis* (Wangerh.) Sarg., *C. ovata* (Mill.) K. Koch, *C. tomentosa* (Lam. ex Poir.) Nutt., and *Liriodendron tulipifera* L.; noteworthy is *Carya leioderms* Sarg., which is listed as imperiled to rare and local in the state (S2S3, MNHP 2002a). Common intermediate/midstory trees include *Acer rubrum* L., *Nyssa sylvatica* Marshall, *Celtis laevigata* Willd., *Ulmus americana* L., and *U. alata* Michx. Examples of small trees/large shrubs include *Asimina triloba* Dunal, *Ilex decidua* Walter, *Carpinus caroliniana* Walter, *Ostrya virginiana* (Mill.) K. Koch, *Rhododendron canescens* (Michx.) Sweet, *Aesculus pavia* L., *Hamamelis virginiana* L., *Lindera benzoin* (L.) Blume, *Sassafras albidum* (Nutt.) Nees, *Amelanchier arborea* (F. Michx.) Fernald, *Crataegus viridis* L., and *Planera aquatica* J.F. Gmel.; noteworthy records include *Ptelea trifoliata* L. and *Staphylea trifolia* L., which are listed as rare and local to apparently secure (S2S3) and rare and local (S3) in the state, respectively (MNHP 2002a, 2002b). The understory consists of a mixture of small shrubs, includ-

Table 6 legend (continued)

International Trade in Endangered Species of Wild Fauna and Flora, 27 UST 1087; TIAS No. 8249. II = Appendix II species, i.e., (a) a species which, although not necessarily threatened with extinction, may become so unless trade is subject to strict regulations, or (b) a species which must be subject to regulation in order that trade in certain specimens of species referred to under (a) may be brought under effective control, i.e., species similar in appearance.—^eUSDA Forest Service Technical Publication R8-TP2 (Kral 1983). T = threatened, R = rare.

ing *Cornus stricta* Lam., *Vaccinium* spp., *Hydrangea quercifolia* W. Bartram, and *Itea virginica* L.; and herbs, including such ferns as *Botrychium biternatum* (Sav.) Underw. and *Onoclea sensibilis* L., such forbs as *Thaspium trifoliatum* (L.) A. Gray, *Dicliptera brachiata* (Pursh) Spreng., *Amsonia tabernaemontana* Walter, *Aristolochia tomentosa* Sims, *Pluchea camphorata* (L.) DC., *Solidago caesia* L., *Lobelia cardinalis* L., *Specularia biflora* (Ruiz & Pav.) Fisch. & C.A. Mey., *Desmodium canescens* (L.) DC., *D. cuspidatum* (Muhl. ex Willd.) DC. ex Loudon, *Vicia caroliniana* Walter, *Triadenum* spp., *Collinsonia tuberosa* Michx., *Lycopus virginicus* L., *Spigelia marilandica* L., *Ludwigia* spp., *Polygonum virginianum* L., *Epifagus virginiana* (L.) Baton, *Gratiola* spp., *Arisaema dracontium* (L.) Schott, *Commelina virginica* L., *Tradescantia virginiana* L., *Maianthemum racemosum* (L.) Link, and *Dioscorea villosa* L., and such graminoids as *Carex abscondita* Mack., *C. annectens* (E.P. Bicknell) E.P. Bicknell, *C. caroliniana* Schwein., *C. corrugata* Fernald, *C. flaccosperma* Dewey, *C. leavenworthii* Dewey, *C. longii* Mack., *C. louisianica* L.H. Bailey, *C. reniformis* (L.H. Bailey) Small, *C. typhina* Michx., *Cinna arundinacea* L., *Dichanthelium commutatum* (Schult.) Gould, *Leersia oryzoides* (L.) Sw., *L. virginica* Willd., *Panicum rigidulum* Bosc ex Nees in Mart., and *Paspalum repens* P.J. Bergius. *Pleopeltis polypodioides* (L.) E.G. Andrews & Windham var. *michauxiana* (Weath.) E.G. Andrews & Windham in Windham is a common epiphyte. Noteworthy understory species listed as sensitive (MNHP 2002a, 2002b) include *Dasistoma macrophylla* (Nutt.) Raf. (rare and local to apparently secure-S3S4), *Lilium superbum* L. (S3S4), *Muhlenbergia glabriflora* Scribn. (uncertain status-S?), *Spiranthes ovalis* Lindl. (imperiled to rare and local-S2S3), and *Triphora trianthophora* (Sw.) Rydb. (S2S3).

In the Black Prairie physiographic region, intensive agriculture has reduced once extensive bottomland hardwood forests to narrow gallery forests along small streams. Here, noteworthy species include *Quercus nigra* L., *Q. durandii* Buckley, *Carya tomentosa* (Lam. ex Poir.) Nutt., and *C. laciniosa* (F. Michx.) G. Don, which is listed as imperiled to rare and local in the state (S2S3, MNHP 2002a), in the overstory, with *Acer negundo* L., *Morus rubra* L., and *Ulmus rubra* Muhl. as intermediates. Shrubs include *Asimina triloba* (L.) Dunal, *Aesculus glabra* Willd., which is listed as possibly imperiled in the state (S2?, MNHP 2002a), *A. pavia* L., and *Prunus americana* Marshall; *Zizia aurea* (L.) W.D.J. Koch and *Eupatorium rugosum* are common herbaceous species.

2. *Swamp Forests*.—Swamp forests are permanently/semi-permanently inundated, and occur along the shallow margins of existing stream channels and old oxbow lakes that have been cut off from the main channel and have been partially silted in. Because of the small size of streams in Oktibbeha County, swamp forests are fairly limited in extent, with shallow water depths. Furthermore, they are restricted to the Interior Flatwoods physiographic region; the Black Prairie lacks streams of sufficient size. Frequency and duration of flood-

ing limits the species that can occur in swamp forests to extremely water-tolerant species. Germination for most species can only occur during periods of low water when the soil is exposed. Thus, in contrast to bottomland hardwood forests, swamp forests have a fairly sparse foliage profile. The overstory is dominated by *Quercus lyrata* Walter and, occasionally, *Taxodium distichum* (L.) L.C. Rich. Where present, water-tolerant shrubs and small trees (e.g., *Itea virginica* L. and *Vaccinium arboreum* Marshall) grow in small patches or singly and sparsely distributed. Because of the presence of standing water, ground vegetation is often absent, or may consist of small patches or scattered individuals of *Justicia ovata* (Walter) Lindau var. *lanceolata* (Chapm.) R.W. Long, *Bidens discoidea* (Torr. & A. Gray) Britton, *Polygonum densiflorum* Meisn., *Saururus cernuus* L., *Gratiola virginiana* L., *Pilea pumila* (L.) A. Gray, *Carex intumescens* Rudge, *C. jorii* L.H. Bailey, and *Leersia lenticularis* Michx.

UPLAND FORESTS AND PRAIRIES

1. Mesophytic upland hardwood forests.—Mesophytic upland hardwood forests are typically found in the Pontotoc Ridge physiographic region (see Morris et al. 1993); in the Interior Flatwoods, they rarely occur in the transition zone between upland pine/pine-mixed hardwood forests and bottomland forests; in the Black Prairie, they rarely occur in association with streams. Mesophytic upland hardwood forests are among the most diverse plant communities in Oktibbeha County; they are also home to some of the rarest plants in the county, featuring 18 species listed by the MNHP (2002a, 2002b), with many of them occurring only in this community. Mesophytic upland hardwood forests are characterized by an overstory of mixed deciduous hardwoods, including *Acer barbatum* Michx., *Fagus grandifolia* Ehrh., *Quercus alba* L., *Q. muehlenbergii* Engelm., *Q. shumardii* Buckley, *Q. stellata* Wangenh., *Carya carolinenseptentrionalis* (Ashe) Engl. & Graebn., *C. myristiciformis* (F. Michx.) Nutt., *Juglans nigra* L., *Liriodendron tulipifera* L., and *Platanus occidentalis* L.; noteworthy overstory species are *Fraxinus quadrangulata* Michx. and *Ulmus serotina* Sarg., which are listed as imperiled (S2) and possibly rare and local (S3?) in the state, respectively (MNHP 2002a). Conifers are absent from this community. Common under- and midstory trees and shrub include *Asimina triloba* (L.) Dunal, *Viburnum rufidulum* Raf., *Ostrya virginiana* (Mill.) K. Koch, *Cornus florida* L., *Rhododendron canescens* (Michx.) Sweet, *Aesculus pavia* L., *Tilia americana* L., and *Ulmus americana* L.; noteworthy mid- and understory associates are *Evonymus atropurpureus* Jacq. and *Crataegus calpodendron* (Ehrh.) Medik., which are listed as imperiled to rare and local (S2S3) and being of uncertain status (S?) in Mississippi, respectively (MNHP 2002a). Also common are lianas, including *Smilax bona-nox* L., *S. lasioneura* Hook., and *S. pulverulenta* Michx. The herbaceous plant layer is characterized by such forbs as *Sanicula odorata* (Raf.) K.M. Pryer & L.R. Phillippe, *Thaspium barbinode* (Michx.) Nutt.,

Heliopsis gracilis Nutt., *Podophyllum peltatum* L., *Cynoglossum virginianum* L., *Lithospermum latifolium* Michx., *Myosotis macrosperma* Engelm., *Cardamine concatenata* (Michx.) Sw., *Monotropa hypopithys* L., *Desmodium glutinosum* (L.) DC., *D. rotundifolium* DC., *Vicia caroliniana* Walter, *Spigelia marilandica* L., *Oxalis violacea* L., *Sanguinaria canadensis* L., *Anemone virginiana* L., *Thalictrum thalictroides* (L.) Eames & B. Boivin, *Agrimonia rostellata* Wallr., *Galium uniflorum* Michx., *Pedicularis canadensis* L., *Scrophularia marilandica* L., *Physalis heterophylla* Nees, *Viola* spp., *Arisaema* spp., *Lilium michauxii* Poir., *Tipularia discolor* (Pursh) Nutt., and *Trillium recurvatum* L.C. Beck, including such spring ephemerals as *Claytonia virginica* L., *Allium canadense* L., *Nothoscordum bivalve* (L.) Britton, *Uvularia sessilifolia* L., and *Hypoxis hirsuta* (L.) Coville; such graminoids as *Carex albicans* Willd. ex Spreng. var. *albicans*, *C. lupulina* Muhl. ex Willd., *C. striatula* Michx., *C. vulpinoidea* Michx., *Luzula echinata* (Small) F.J. Herm., *Agrostis perennans* (Walter) Tuck., *Chasmanthium latifolium* (Michx.) H.O. Yates, *C. sessiliflorum* (Poir.) H.O. Yates, *Dichanthelium boscii* (Poir.) Gould & C.A. Clark, *D. polyanthes* (Schult.) Mohlenbr., *Melica mutica* Walter, *Panicum anceps* Michx., and *Poa autumnalis* Muhl. ex Elliott; as well as a diverse array of ferns and fern allies, including *Selaginella apoda* (L.) Spring, *Woodwardia areolata* (L.) T.Moore, *Polystichum acrostichoides* (Michx.) Schott, *Botrychium virginianum* (L.) Sw., *Osmunda cinnamomea* L., *O. regalis* L., *Pleopeltis polypodioides* (L.) E.G. Andrews & Windham var. *michauxiana* (Weath.) E.G. Andrews & Windham in Windham, *Athyrium filix-femina* (L.) Roth ex Mert. ssp. *asplenioides* (Michx.) Farw., and *Onoclea sensibilis* L.; noteworthy species from this association listed by MNHP (2002a, 2002b) are *Apios priceana* B.L. Rob. (critically imperiled-S1, federally threatened), *Asarum canadense* L. (imperiled to rare and local-S2S3), *Carex gracilescens* Steud. (S2S3), *C. jamesii* Schwein. (critically imperiled to imperiled-S1S2), *C. laxiflora* Lam. (S1), *Dasistoma macrophylla* (Nutt.) Raf. (rare and local to apparently secure-S3S4), *Frasera caroliniensis* Walter (S2S3), *Hexalectris spicata* (Walter) Barnhart (imperiled-S2), *Hybanthus concolor* (T.F. Forst.) Spreng. (S2), *Menispermum canadense* L. (S3S4), *Panax quinquefolius* L. (rare and local-S3), *Taenidia intergerrima* (L.) Drude (S1), *Thalictrum debile* Buckley (S1S2), and *Triosteum angustifolium* L. (S3).

2. *Xeric upland hardwood forests.*—In Oktibbeha County, xeric upland hardwood forests occur on dry secondary sandstone ridges in all 3 physiographic regions: on isolated hills scattered throughout the Black Prairie, on the Pontotoc Ridge, and in the transition zone from the Interior Flatwoods to the North-central Plateau physiographic region. Xeric upland hardwood forests in Oktibbeha County feature a unique complement of floristic elements, many of which are found in no other plant community in the county. In the Black Prairie, dominant overstory species include *Quercus marilandica* Muenchh., *Q. muehlenbergii* Engelm., *Q. velutina* Lam., *Liquidambar styraciflua* L., *Carya*

myristiciformis (F. Michx.) Nutt., and *C. tomentosa* (Lam. ex Poir.) Nutt.; noteworthy overstory species include *Quercus macrocarpa* Michx., which is listed as imperiled in the state (S2, MNHP 2002a). Common trees, shrubs, and woody vines of the mid- and understory are *Campsis radicans* (L.) Seem. ex Bureau, *Symphoricarpos orbiculatus* Moench, *Cornus drummondii* C.A. Mey., *Vaccinium arboreum* Marshall, *Amorpha fruticosa* L., *Sassafras albidum* (Nutt.) Nees, *Maclura pomifera* (Raf.) C.K. Schneider, *Crataegus engelmannii* Sarg., and *Zanthoxylum clava-herculis* L. Examples of characteristic herbaceous species are *Matelea gonocarpos* (Walter) Shinnery, *Rudbeckia hirta* L., *Sagina decumbens* (Elliott) Torr. & A. Gray, *Desmodium ciliare* (Muhl. ex Willd.) DC., *Anagallis minima* (L.) Krause, *Ranunculus micranthus* Nutt., *Agrimonia rostellata* Wallr., *Fragaria virginiana* Duchesne, *Galium pilosum* Aiton, *Carex blanda* Dewey, *C. bushii* Mack., *C. umbellata* Schkuhr ex Willd., *Juncus tenuis* Willd., and *Luzula bulbosa* (Alph. Wood) Smyth & Smyth; noteworthy associates are *Erythronium albidum* Nutt. and *Spiranthes lacera* (Raf.) Raf., which are listed as imperiled (S2) and rare and local to apparently secure (S3S4) in the state, respectively (MNHP 2002a, 2002b). On the Pontotoc Ridge, characteristic woody species include *Campsis radicans* (L.) Seem. ex Bureau, *Lonicera sempervirens* L., *Quercus shumardii* Buckley, *Liquidambar styraciflua* L., *Carya myristiciformis* (F. Michx.) Nutt., *Sassafras albidum* (Nutt.) Nees, *Celtis laevigata* Willd., and *Smilax lasioneura* Hook., with *Antennaria plantaginifolia* (L.) Richardson, *Eriogon strigosus* Muhl. ex Willd., *Vicia minutiflora* F.Dietr., *Oxalis violacea* L., *Passiflora lutea* L., *Carex blanda* Dewey, *C. cephalophora* Muhl. ex Willd., *C. triangularis* Boeck, and *Juncus tenuis* Willd. being typical herbaceous species; *Echinacea purpurea* (L.) Moench, listed as rare and local to apparently secure in the state (S3S4, MNHP 2002a), is a noteworthy record from this association. The overstory of xeric upland hardwood forests in the Interior Flatwoods physiographic region is dominated by such species as *Quercus alba* L., *Q. falcata* Michx., *Q. nigra* L., *Q. pagoda* Raf., *Q. shumardii* Buckley, *Liquidambar styraciflua* L., and *Carya glabra* (Mill.) Sweet; *Campsis radicans* (L.) Seem. ex Bureau, *Sassafras albidum* (Nutt.) Nees, *Crataegus spathulata* Michx., and *Ampelopsis arborea* (L.) Koehne are common shrubs and vines of the mid- and understory. *Asclepias amplexicaulis* Small, *Matelea gonocarpos* (Walter) Shinnery, *Euphorbia corollata* L., *Lespedeza virginica* (L.) Britton, *Pycnanthemum tenuifolium* Schrad., *Trichostema brachiatum* L., *Rhexia mariana* L. var. *mariana*, *Oxalis violacea* L., *Passiflora lutea* L., *Aureolaria flava* (L.) Farw., *Juncus tenuis* Willd., *Luzula bulbosa* (Alph. Wood) Smyth & Smyth, *Chasmanthium sessiliflorum* (Poir.) H.O. Yates, and *Dichanthelium boscii* (Poir.) Gould & C.A. Clark are typical herbaceous species.

3. *Pine Forests and Pine-Mixed Hardwood Forests.*—By and large, pine forests and pine-mixed hardwood forests in Oktibbeha County are restricted to the Interior Flatwoods physiographic region. The vast majority are intensively

managed pine plantations; naturally regenerated, unmanaged pine forests are rare. Management activities associated with timber production, including prescribed burns on variable rotations, pre-commercial and commercial thinning, and herbicide injection of undesirable hardwoods, result in reduced vegetation stratification and woody species richness in managed pine forests, and prevent naturally occurring plant succession. As a result, species composition differs significantly between managed and natural stands (Table 7). For example, natural pine or pine-hardwood forests, in addition to having a more diverse overstory, usually feature a well-developed midstory consisting of a diverse array of hardwoods, including *Acer rubrum* L., *Carya tomentosa* (Lam. ex Poir.) Nutt., *Cornus florida* L., *Liquidambar styraciflua* L., *Nyssa sylvatica* Marshall, *Diospyros virginiana* L., *Quercus* spp., *Sassafras albidum* (Nutt.) Nees, *Prunus serotina* Ehrh., and *Ulmus alata* Michx. (Table 7). Managed pine forests, on the other hand, where development of midstory vegetation is actively prevented, have only two vegetation layers: an overstory composed almost exclusively of *Pinus taeda* L. (and some *P. echinata* Mill.), and an understory that, much like that of pine-mixed hardwood forests, is characterized by a diverse assemblage of plants, including such graminoids as *Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *lindheimeri* (Nash) Freckmann & Lelong in ed., *D. laxiflorum* (Lam.) Gould, *Saccharum brevibarbe* (Michx.) Pers. ssp. *contortum* (Elliott) R.D. Webster, *S. giganteum* (Walter) Pers., and *Schizachyrium scoparium* (Michx.) Nash in Small, as well as the fire-adapted *Andropogon gerardii* Vitman and *Sorghastrum nutans* (L.) Nash in Small; a variety of forbs, including *Apocynum cannabinum* L., *Asclepias tuberosa* L., *Aster solidagineus* Michx., *Bidens aristosa* (Michx.) Britton, *Eupatorium* spp., *Euthamia tenuifolia* (Pursh) Nutt., *Liatris spicata* (L.) Willd., *Solidago* spp., *Chamaecrista fasciculata* (Michx.) Greene, *Lespedeza* spp., *Tephrosia virginiana* (L.) Pers., *Seymeria cassioides* (J.F. Gmel.) S.F. Blake, *Aletris aurea* Walter, and *Spiranthes tuberosa* Raf.; such lianas as *Rhus radicans* L., *Lonicera japonica* Thunb., *Gelsemium sempervirens* (L.) W.T. Aiton, *Vitis rotundifolia* Michx., *Smilax glauca* Walter, and *S. rotundifolia* L.; shrubs and small trees, including *Aralia spinosa* L., *Vaccinium* spp., *Hypericum hypericoides* (L.) Crantz, *Crataegus* spp., and *Rubus* spp.; and tree seedlings, including *Carya glabra* (Mill.) Sweet and *Quercus* spp. (Table 7). Noteworthy pine and pine-mixed hardwood forest associates include *Asclepias hirtella* (Pennell) Woodson and *Lobelia appendiculata* A.DC., which are listed as imperiled (S2) and imperiled to rare and local (S2S3) in the state, respectively (MNHP 2002a).

4. *Prairies*.—Betz (1977) defines a prairie as a vegetative community composed of native perennial grasses and other herbaceous plants, and in which grasses contribute much of the vegetative cover. Prairies in Oktibbeha County are located largely in the Black Prairie physiographic region, and are of the blackland type, so named after the deep mantle of fertile black soil high in organic

TABLE 7. Importance value^a of under-, mid-, and overstory plant species in representative managed and unmanaged pine forests and pine-mixed hardwood forests, Oktibbeha County, Mississippi, Fall 1993 (data from Theriot et al. 1993)^b.

Species	Pine forest (managed)	Pine forest (unmanaged)	Pine-mixed hardwood forest
Understory			
<i>Carya glabra</i> (Mill.) Sweet	38.98	-	-
<i>Lonicera japonica</i> Thunb.	61.71	72.19	58.34
<i>Rubus</i> spp.	9.23	93.87	10.23
<i>Smilax</i> spp.	15.67	22.61	8.14
<i>Solidago</i> spp.	9.12	22.33	16.91
<i>Rhus radicans</i> L.	11.67	6.13	17.03
<i>Ulmus alata</i> Michx.	2.83	14.41	2.45
Misc. graminoids	17.73	16.19	2.58
Misc. forbs	17.69	15.13	47.51
<i>Eupatorium</i> spp.	-	37.14	3.62
<i>Bidens</i> spp.	-	-	11.13
<i>Diospyros virginiana</i> L.	14.02	-	6.10
<i>Saccharum giganteum</i> (Walter) Pers.	24.21	-	18.79
<i>Lespedeza</i> spp.	2.46	-	10.99
<i>Panicum</i> spp. (s.l.)	2.58	-	14.95
<i>Pinus taeda</i> L.	11.45	-	5.82
<i>Quercus</i> spp.	18.36	-	39.62
<i>Vitis rotundifolia</i> Michx.	28.60	-	11.09
Misc. tree seedlings	14.00	-	7.14
Total:	300.00	300.00	300.00
Midstory			
	<i>no midstory present</i>		
<i>Diospyros virginiana</i> L.		15.14	-
<i>Nyssa sylvatica</i> Marshall		53.64	-
<i>Acer rubrum</i> L.		32.70	9.36
<i>Carya tomentosa</i> (Poir.) Nutt.	-	54.76	6.44
<i>Cornus florida</i> L.	-	3.94	7.90
<i>Liquidambar styraciflua</i> L.	-	55.27	104.44
<i>Pinus</i> spp.	-	12.27	60.20
<i>Quercus</i> spp.	-	61.61	28.74
<i>Ulmus alata</i> Michx.	-	10.65	44.98
<i>Juniperus virginiana</i> L.	-	-	24.58
<i>Prunus serotina</i> Ehrh.	-	-	13.36
Total:	0.00	300.00	300.00
Overstory			
<i>Pinus</i> spp.	275.81	266.65	178.28
<i>Quercus</i> spp.	24.19	18.12	7.14
<i>Liquidambar styraciflua</i> L.	-	6.99	87.00
<i>Juniperus virginiana</i> L.	-	-	19.93
<i>Ulmus alata</i> Michx.	-	-	7.65
<i>Acer rubrum</i> L.	-	8.24	-
Total:	300.00	300.00	300.00

matter, which occurs over a substrate of Cretaceous chalk or marl (Foti 1989). Today, most native prairies in Oktibbeha County have been replaced by agriculture (Lowe 1921; Brent 1973), with only few relicts of this highly threatened ecoregion remaining along highway and powerline rights-of-way. Prairies are among the most diverse plant communities in Oktibbeha County, albeit the condition of the prairie vegetation is generally quite poor due to the extent of human disturbance. Prairies are also home to some of the rarest plants in the county, featuring 19 species listed by the MNHP (2002a, 2002b), with many of them occurring only in this community. Prairie habitats in Oktibbeha County are dominated by a complex of graminoids, composites, and legumes. Characteristic graminoids include *Carex basiantha* Steud., *C. cherokeensis* Schwein., *C. granularis* Muhl. ex Willd., *C. hirsutella* Mack., *C. muehlenbergii* Schkuhr ex Willd., *Scleria oligantha* Michx., *Juncus torreyi* Coville, *Andropogon glomeratus* (Walter) Britton, Sterns & Poggenb., *A. virginicus* L., *Aristida longespica* Poir. in Lam., *A. oligantha* Michx., *Bothriochloa laguroides* (DC.) Pilger in Engler ssp. *torreyana* (Steud.) Allred & Gould, *Dichanthelium depauperatum* (Muhl.) Gould, *Panicum virgatum* L., *Phalaris caroliniana* Walter, *Schizachyrium scoparium* (Michx.) Nash in Small, *Setaria parviflora* (Poir.) Kerguelen, and *Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood. Common forbs are *Ruellia humilis* Nutt., *Apocynum cannabinum* L., *Asclepias* spp., *Aster* spp., *Cacalia plantaginea* (Raf.) Shinnery, *Dracopis amplexicaulis* (Vahl) Cass., *Heterotheca camporum* (Greene) Shinnery, *Liatris* spp., *Ratibida pinnata* (Vent.) Barnh., *Rudbeckia fulgida* Aiton, *Silphium* spp., *Solidago* spp., *Lithospermum canescens* (Michx.) Lehm., *Lobelia spicata* Lam., *Cuscuta pentagona* Engelm. var. *pentagona*, *Croton* spp., *Euphorbia* spp., *Tragia urticifolia* Michx., *Crotalaria sagittalis* L., *Dalea candida* Willd., *D. purpurea* Vent., *Sabatia angularis* (L.) Pursh, *Hypericum sphaerocarpum* Michx., *Monarda citriodora* Cerv. ex. Lag., *Anemone caroliniana* Walter, *Delphinium carolinianum* Walter ssp. *carolinianum*, *Ranunculus fascicularis* Muhl. ex Bigelow, *Potentilla simplex* Michx., *Hedyotis* spp., *Agalinis* spp., *Buchnera floridana* Gandog., *Penstemon digitalis* Nutt. ex Sims, *P. laevigatus* Aiton, *Verbena bipinnatifida* Nutt., *V. simplex* Lehm., *Manfreda virginica* (L.) Salisb. ex Rose, *Hypoxis hirsuta* (L.) Coville, and *Sisyrinchium albidum* Raf. In disturbed areas, such ruderal species as *Ambrosia psilostachya* DC., *A. trifida* L., *Iva annua* L., *Lactuca saligna* L., *Lepidium virginicum* L., *Medicago lupulina* L., and *Melilotus alba* Medik. may be evident. Noteworthy prairie species listed by MNHP (2002a, 2002b) include *Perideridia americana* (Nutt. ex DC.) Reichenb. (critically imperiled to imperiled-S1S2), *Amphiachyris*

^aThe importance value is the sum of relative frequency, relative density, and relative dominance (Daubenmire 1968).—^bData for understory estimates based on 100 ft. of line transect per habitat type using the intercept method (Canfield 1942); data for mid- and overstory estimates based on 10 sample points per habitat type using the point-centered-quarter (PCQ) method (Cottam & Curtis 1956).

dracunculoides (DC.) Nutt. (critically imperiled-S1), *Aster ericoides* L. (imperiled-S2), *Evax prolifera* Nutt. ex DC. (S1), *Prenanthes aspera* Michx. (S2), *Neptunia lutea* (Leavenw.) Benth. (rare and local to apparently secure-S3S4), *Linum sulcatum* Riddell (S3S4), *Dodecatheon meadia* L. (S2), *Delphinium tricornis* Michx. (S2), *Agalinis pseudaphylla* (Pennell) Shinnars (S2), *Penstemon tenuiflorus* Pennell (imperiled to rare and local-S2S3), *Tomanthera auriculata* (Michx.) Raf. (S1), *Carex jamesii* Schwein. (S1S2), *C. meadii* Dewey (S3S4), *C. microdonta* Torr. & Hook. (possibly imperiled-S2?), *Nemastylis geminiflora* Nutt. (S2), *Spiranthes magnicamporum* Sheviak (S2S3), and *Bouteloua curtipendula* (Michx.) Torr. in Marcy (S3S4); *Onosmodium molle* Michx. ssp. *hispidissimum* (Mack.) B. Boivin is considered rare by USDA Forest Service (Kral 1983). Further discussion of Black Prairie floristics in Oktibbeha County can be found in Leidolf and McDaniel (1998).

5. *Prairie Cedar Woodlands*.—Leidolf and McDaniel (1998) define a prairie cedar woodland as “...*Juniperus virginiana* L.-dominated patches of woody vegetation restricted to thin, highly erodible, calcareous soils over chalk ... that are often interspersed with areas of exposed chalk, giving them a glade-like appearance”. Prairie cedar woodlands are commonly found in the Black Prairie physiographic region of Oktibbeha County. Leidolf and McDaniel (1998) suggested that the apparent abundance of this plant community is a rather recent feature, and linked it to the absence of natural disturbance. Lowe (1921) also noted that “... lands formerly in cultivation and now thrown out, show a strong tendency to grow up in trees, ...”

Characteristic tree and shrub species of this community include *Juniperus virginiana* L. var. *virginiana*, *Rhus aromatica* Aiton, *Ilex decidua* Walter, *Viburnum rufidulum* Raf., *Cornus drummondii* C.A. Mey., *Quercus marilandica* Muenchh., *Q. muehlenbergii* Engelm., *Q. stellata* Wangerh., *Sassafras albidum* (Nutt.) Nees, *Maclura pomifera* (Raf.) C.K. Schneid., *Morus rubra* L., *Fraxinus americana* L., *Ligustrum sinense* Lour., *Ceanothus americanus* L., *Rhamnus caroliniana* Walter, *Crataegus crus-galli* L., *C. engelmannii* Sarg., *Rosa carolina* L., *Rubus cuneifolius* Pursh, *Bumelia lycioides* (L.) Pers., *Celtis laevigata* Willd., *Ulmus alata* Michx., and *U. rubra* Muhl.; *Campsis radicans* (L.) Seem. ex Bureau, *Lonicera japonica* Thunb., *Berchemia scandens* (Hill) K. Koch, *Ampelopsis arborea* (L.) Koehne, *Parthenocissus quinquefolia* (L.) Planch., *Vitis aestivalis* Michx., and *Smilax bona-nox* L. are common lianas. Herbaceous vegetation is sparse and includes *Ruellia caroliniensis* (J.F. Gmel.) Steud., *Sanicula canadensis* L., *Euphorbia spathulata* Lam., *Apios americana* Medik., *Cocculus carolinus* (L.) DC., *Fragaria virginiana* Duchesne, *Carex bushii* Mack., *C. cherokeensis* Schwein., and *C. oxylepis* Torr. & Hook var. *pubescens* J.K. Underw.; occasionally ferns, such as *Asplenium platyneuron* (L.) Oakes and *Pleopeltis polypodioides* (L.) E.G. Andrews & Windham var. *michauxiana* (Weath.) E.G. Andrews & Windham in Windham can be found. A number of unique floristic elements

found in no other habitat in Oktibbeha County were also found: *Rhus toxicodendron* L., *Helianthus divaricatus* L., and *Panicum flexile* (Gatt.) Scribn. in Kearney. Noteworthy prairie cedar woodland species listed by MNHP (2002a, 2002b) include *Ophioglossum engelmannii* Prantl (critically imperiled-S1), *Neptunia lutea* (Leavenw.) Benth. (rare and local to apparently secure-S3S4), *Dodecatheon meadia* L. (imperiled-S2), *Rhamnus lanceolata* Pursh (S2), *Penstemon tenuiflorus* Pennell (imperiled to rare and local-S2S3), and *Ponthieva racemosa* (Walter) C.Mohr (possibly imperiled-S2?). Morris et al. (1993) and Leidolf and McDaniel (1998) provide additional comments on prairie cedar woodland floristics in Oktibbeha County.

6. *Chalk Outcrops*.—Chalk outcrops in Oktibbeha County are restricted to the Black Prairie physiographic region. They were first recognized as being floristically distinct by Hilgard (1860), who referred to them as “bald prairies”. Leidolf and McDaniel (1998) defined chalk outcrops as “... areas of exposed chalk, with all of the overlying soil eroded away ...”, and suggested that aggravated erosion during periods of intense cultivation may have been responsible for an apparent decline in native prairie grasslands accompanied by a simultaneous increase in the abundance of chalk outcrops. Because conditions for plant growth in this unique habitat are severe, chalk outcrops do not support a diverse plant community; however, they harbor floristic elements not found elsewhere in Oktibbeha County, including *Senecio obovatus* Muhl. ex Willd., *Chamaesyce humistrata* (Engelm.) Small, *C. serpens* (Kunth) Small, *Lespedeza procumbens* Michx., and *Mirabilis albida* (Walter) Heimerl. Due to ample rainfall and low evaporation, the ground is usually moist during winter and spring months, and colonies of the blue-green alga *Nostoc* sp. can occasionally be found; in the summer, harsher, drier conditions prevail. Plant species characteristic of this habitat type include both native prairie grassland remnants, and plants that colonize chalk outcrops after erosion. Commonly found trees and shrubs include *Juniperus virginiana* L. var. *virginiana*, *Rhus aromatica* Aiton, *Cornus drummondii* C.A. Mey., *Hypericum sphaerocarpum* Michx., *Ceanothus americanus* L., *Rhamnus caroliniana* Walter, and *Prunus angustifolia* Marshall. Characteristic herbs are *Amaranthus rudis* J.D. Sauer, *Asclepias viridis* Walter, *Aster patens* Aiton, *Brickellia eupatorioides* (L.) Shinnery var. *eupatorioides*, *Coreopsis lanceolata* L., *Heterotheca camporum* (Greene) Shinnery, *Liatris squarrosa* (L.) Michx., *Silphium laciniatum* L., *Lithospermum canescens* (Michx.) Lehm., *Brassica erucastrum* L., *Euphorbia corollata* L., *Dalea candida* Willd., *D. purpurea* Vent., *Sabatia angularis* (L.) Pursh, *Agalinis tenuifolia* (Vahl) Raf., *Verbena bipinnatifida* Nutt., *V. simplex* Lehm., and *Sisyrinchium albidum* Raf. Noteworthy members of this association listed by MNHP (2002a) are *Sedum pulchellum* Michx. (critically imperiled-S1), *Rhamnus lanceolata* Pursh (imperiled-S2), *Penstemon tenuiflorus* Pennell (imperiled to rare and local-S2S3), and *Nemastylis geminiflora* Nutt. (S2). Further discussions of chalk outcrop

floristics in Oktibbeha County are provided by Morris et al. (1993) and Leidolf and McDaniel (1998).

AQUATIC COMMUNITIES

Aquatic communities in Oktibbeha County include both such lotic systems as rivers, creeks, canals, and drainage ditches, and lentic systems, including lakes, ponds, and artificial impoundments. Vegetation in these communities is mostly restricted to narrow regions near the shore referred to as riparian areas. Riparian areas generally have higher species diversity than either the adjacent terrestrial or aquatic communities, because they serve as a transition between the two systems. They are also generally more productive because of periodic influxes of nutrients from seasonal floods, and favorable moisture conditions year-round. Species composition at any point in a riparian area is largely a function of the degree or periodicity of inundation from the adjacent stream (Mitsch & Gosselink 1986).

1. Rivers/Creeks.—We discuss here the flora associated with riparian areas immediately adjacent to the stream bank, including those species growing on banks, associated mud flats, and directly in the stream (emergents). Submergent species are generally absent in local streams, because the turbid water effectively prevents photosynthesis; where clear-water streams do exist (i.e., in the Black Prairie physiographic region) pH is likely too high for plant growth, and consequently, no submergent species were observed. As mentioned previously, there are no major alluvial systems in Oktibbeha County; thus extensive riparian swamp forests are not represented.

In the Interior Flatwoods physiographic region, streambank associations include such small trees and shrubs as *Quercus lyrata* Walter, *Planera aquatica* J.F. Gmel., *Salix nigra* Marshall, *Acer negundo* L., *Betula nigra* L., *Prunus serotina* Ehrh., and *Evonymus americanus* L., as well as such woody vines as the introduced *Lonicera japonica* Thunb., and herbaceous plants, including *Thaspium trifoliatum* (L.) A. Gray, *Aristolochia tomentosa* Sims, *Leersia virginica* Willd., and *Paspalum repens* P.J. Bergius; noteworthy members of this association include *Ptelea trifoliata* L., which is listed as rare and local to apparently secure in the state (S3S4, MNHP 2002b). Due to their ephemeral nature, mudflat communities in the Interior Flatwoods are generally limited to such herbaceous plants as *Lobelia cardinalis* L., *Lycopus virginicus* L., *Samolus valerandi* L. ssp. *parviflorus* (Raf.) Hultén, *Lindernia dubia* (L.) Pennell, *Mimulus alatus* Aiton, *Physalis virginiana* Mill., *Boehmeria cylindrica* (L.) Sw., and *Commelina virginica* L. Emergents are few, and include *Ammania coccinea* Rottb., *Hydrolea uniflora* Raf., and *Penthorum sedoides* L.

Streambank associations in the Black Prairie physiographic region are characterized by *Aesculus pavia* L., *Tilia americana* L., *Lonicera japonica* Thunb., *Apios americana* Medik., *Mimulus alatus* Aiton, and *Silphium perfoliatum* L.

Noteworthy streambank associates include *Aesculus glabra* Willd., which is listed as possibly imperiled in the state (S2?, MNHP 2002a), and was found exclusively on *Catalpa* silty clay loam. Common emergents are *Ludwigia peploides* (Kunth) Raven and *Juncus acuminatus* Michx.

2. *Canals/Drainage Ditches*.—Canals/drainage ditches include both artificial, human-made structures, such as irrigation canals and culverts, and semi-natural features, such as unimproved roadside ditches. These habitats vary considerably with respect to extent, seasonality, and speed of water flow; they include habitats subject to year-round water flow as well as ephemeral habitats. Like rivers and creeks, the vegetation associated with canals/drainage ditches can be separated into riparian species (i.e., those species growing on the banks) and emergent species; additionally, the flora of canals/drainage ditches includes a small number of submergent species.

In the Interior Flatwoods physiographic region, plants commonly found on canal and ditch banks include such small trees and shrubs as *Sambucus canadensis* L. and *Cephalanthus occidentalis* L., as well as such herbaceous species as *Justicia ovata* (Walter) Lindau var. *lanceolata* (Chapm.) R.W. Long, *Ptilimnium capillaceum* (Michx.) Raf., *Rotala ramosior* (L.) Koehne, *Ranunculus pusillus* Poir., *Dichanthelium polyanthes* (Schultes) Mohlenbr., *D. sphaerocarpon* (Elliott) Gould, and *Urochloa ramosa* (L.) T.Q. Nguyen; noteworthy bank species include *Muhlenbergia glabriflora* Scribn., which is listed as being of uncertain status in Mississippi (S?, MNHP 2002a). Dominant emergent species primarily include such obligate and facultative aquatic forbs, sedges, and rushes as *Physostegia angustifolia* Fern., *Mollugo verticillata* L., *Ludwigia* spp., *Penthorum sedoides* L., *Polygonum* spp., *Gratiola* spp., *Commelina virginica* L., *Carex flaccosperma* Dewey, *C. joorii* L.H. Bailey, *Cyperus odoratus* L., *C. strigosus* L., *Eleocharis* spp., *Fimbristylis* spp., *Rhynchospora corniculata* (Lam.) A. Gray, *Scirpus atrovirens* Willd., *Iris virginica* L., *Juncus* spp., and *Typha latifolia* L.; noteworthy emergents include *Alisma subcordatum* Raf., which is listed as being of historical occurrence in Oktibbeha County (SH, MNHP 2002a). Submergent species include *Callitriche heterophylla* Pursh and *Najas guadalupensis* (Spreng.) Magnus.

In the Black Prairie physiographic region, canal and ditch banks are characterized by *Sambucus canadensis* L., *Salix exigua* Nutt., *Rorippa sessiliflora* (Nutt.) Hitchc., *Apios americana* Medik., *Ranunculus pusillus* Poir., and *Dichanthelium ravenellii* (Scribn. & Merr.) Gould. Characteristic emergent species in the Black Prairie are *Physostegia angustifolia* Fern., *Ludwigia peploides* (Kunth) Raven, *Polygonum lapathifolium* L., *Lysimachia nummularia* L., *Commelina communis* L., *Carex frankii* Kunth, *Cyperus odoratus* L., *C. acuminatus* Torr. & Hook. ex Torr., *Eleocharis obtusa* (Willd.) Schult., *Scirpus pendulus* Muhl., *Juncus* spp., and *Typha* spp.

3. *Lakes/Ponds/Impoundments*.—All lakes and ponds in Oktibbeha County

are artificial impoundments formed by damming a river, creek, or other drainage. Only two sizable (>250 ha) examples are present, both in the Interior Flatwoods physiographic region: Oktibbeha County Lake and Bluff Lake (most of which is in neighboring Noxubee County). Most other lentic systems are less than 10 ha in size and completely surrounded by private land; thus the flora of these areas may be underrepresented in this document because of poor access. We were able to obtain a fair representation from one such smaller lake, Dorman Lake, which is on public land and also located in the Interior Flatwoods.

The flora of lakes and ponds can be discussed in terms of those species growing in the riparian zone, including the margin or bank, and associated mudflats; those growing in the littoral zone, i.e., the shallow part of the lake immediately adjacent to the shore, including emergents, submergents, rooted-floating, and free-floating species; and those growing in the profundal zone, i.e., the deeper or interior part of the lake, including rooted-floating and free-floating species.

Common species along the margins of lakes and ponds include such small trees and shrubs as *Baccharis halimifolia* L., *Betula nigra* L., *Itea virginica* L., *Cephalanthus occidentalis* L., which also occurs in standing water in mudflats and in the littoral zone, and *Salix humilis* Marshall, as well as herbaceous species, including *Baptisia alba* (L.) R.Br. var. *macrophylla* (Larisey) Isley and *Leptochloa panicoides* (J. Presl) Hitchc. Mudflat associates include *Eryngium prostratum* Nutt. ex DC., *Pluchea camphorata* (L.) DC., *Lobelia cardinalis* L., *Polygala mariana* Mill., *Polygonum aviculare* L., *Ranunculus abortivus* L., *Micranthemum umbrosum* (J.F. Gmel.) S.F. Blake, *Arisaema dracontium* (L.) Schott, *Cyperus erythrorhizos* Muhl., *Cinna arundinacea* L., *Juncus elliotii* Chapm., *Scirpus cyperinus* (L.) Kunth, *Echinodorus cordifolius* (L.) Griseb., and *Sagittaria platyphylla* (Engelm.) J.G. Sm. These last 3 species, along with *Hydrolea uniflora* Raf., *Ludwigia palustris* (L.) Elliott, *Polygonum* spp., *Eleocharis quadrangulata* (Michx.) Roem. & Schult., and *Juncus nodatus* Coville, are also representative emergent species. A noteworthy collection from this association is *Alisma subcordatum* Raf., which is listed as being of historical occurrence in Oktibbeha County (SH, MNHP 2002a).

As their name implies, rooted-floating plants are attached to the substrate, with leaves floating at the lake surface. Rooted-floating and submergent vegetation occurs from the lake margin to a depth of ca. 2 m in the littoral zone. In contrast, free-floating species, including *Azolla caroliniana* Willd. and *Spirodela polyrrhiza* (L.) Schleid., occur in both the littoral and the profundal zone, but generally are blown into clumps on the lee side of water bodies. Submergent species of the littoral zone include *Callitriche heterophylla* Pursh, *Utricularia gibba* L., *Najas minor* All., and *Zanichellia palustris* L. Representative rooted-floating plants are *Brasenia schreberi* J.F. Gmel., *Limnobium spongia* (Bosc) Rich. ex Steud., *Nelumbo lutea* Willd., *Nymphaea odorata* Aiton,

Potamogeton diversifolius Raf., and *P. nodosus* Poir. Frequently, dense vegetation mats formed by rooted-floating plants provide a substrate for other plants to grow hydroponically. However, no evidence of this was found in Oktibbeha County.

SEEPAGE AREAS

Seepage areas are highly localized habitats that occur on relatively thin soil covering an underlying hardpan or rock formation and that, depending on local soil conditions and vegetation, vary considerably with respect to the source and extent of water flow, acidity, and degree and duration of stagnation. However, with the exception of a small number of natural springs, most seepage areas in Oktibbeha County consist of small ground depressions along roadsides in the Interior Flatwoods physiographic region. They are fed by sub-lateral flow from associated pine forests and occur on sandy loams overlain by a thin layer of clay. Consequently, water flow is acidic and highly unpredictable, with very little stagnation occurring. Within the constraints imposed by the local species pool, the vegetation of seepage areas most closely resembles that of a southern pine bog. Characteristic plant species include ferns and fern allies, such as *Lycopodiella alopecuroides* (L.) Cranfill, *L. appressa* (Chapm.) Cranfill, *L. prostrata* (R.M. Harper) Cranfill, *Woodwardia areolata* (L.) T.Moore, and *Pteridium aquilinum* (L.) Kuhn var. *pseudocaudatum* (Clute) A.Heller; graminoids, including *Carex frankii* Kunth, *Cyperus polystachyos* Rottb., *C. rotundus* L., *Kyllinga odorata* Vahl, *Rhynchospora caduca* Elliott, *R. inexpansa* (Michx.) Vahl, *Panicum virgatum* L., and *Paspalum* spp.; as well as numerous forbs, including *Aster solidagineus* Michx., *Pityopsis graminifolia* (Michx.) Nutt., *Buchnera floridana* Gandog., *Ruellia caroliniensis* (J.F. Gmel.) Steud., *Drosera brevifolia* Pursh, *Eryngium prostratum* Nutt. ex DC., *E. yuccifolium* Michx., *Lysimachia ciliata* L., *Polygala nana* (Michx.) DC., *Aletris aurea* Walter, *Spiranthes cernua* (L.) Rich., *S. praecox* (Walter) S.Watson, and *Xyristorta* Small; noteworthy species from this association include *Platanthera cristata* (Michx.) Lindl., which is listed as rare and local in the state (S3, MNHP 2002a). Occasionally, the small shrub *Salix humilis* Marshall can be found. Where stagnant pools of water occur, *Callitriche heterophylla* Pursh may be found submergent.

HUMAN-INFLUENCED COMMUNITIES

1. *Cultivated Fields*.—As of 1997, 17,500 ha, or 15%, of Oktibbeha County was cropland (USDA NASS, <http://www.nass.usda.gov>). Due to its productive soils, most cropland in the county is located in the Black Prairie physiographic region. Crops commonly planted include corn (*Zea mays* L.), cotton, and soy bean (*Glycine max* [L.] Merr.). A variety of weedy species, both native and exotic, readily invades these cultivated fields. Common natives found in this habitat include such forbs as *Amaranthus* spp., *Ciclospermum leptophyllum* (Pers.) Sprague ex Britton & Wilson, *Aster pilosus* Willd. var. *pilosus*, *Helenium*

autumnale L., *Ipomoea lacunosa* L., *I. pandurata* (L.) G.Mey., *Myosotis verna* Nutt., *Rorippa sessiliflora* (Nutt.) Hitchc., *Sibara virginica* (L.) Rollins, *Chamaesyce* spp., *Oenothera laciniata* Hill., *Myosurus minimus* L., *Ranunculus hispidus* Michx. var. *hispidus*, and *Linaria canadensis* (L.) Chaz.; as well as graminoids, including *Juncus bufonius* L., *J. torreyi* Coville, *Digitaria ciliaris* (Retz.) Koel., *Panicum capillare* L., *Paspalum pubiflorum* Rupr. ex E.Fourn., and *Urochloa platyphylla* (Munro ex Wright) R.D. Webster. Frequently encountered exotic forbs are *Arctium minus* Bernh., *Ipomoea hederacea* Jacq., *Capsella bursa-pastoris* (L.) Medik., *Cerastium glomeratum* Thuill., *Spergula arvensis* L., *Medicago arabica* (L.) Huds., *Vicia grandiflora* Scop., *Abutilon theophrasti* Medik., *Polygonum aviculare* L., *Rumex crispus* L., *Ranunculus arvensis* L., and *R. muricatus* L.; representative exotic graminoids include *Cyperus esculentus* L., *C. rotundus* L., *Cyonodon dactylon* (L.) Pers., *Echinochloa colona* (L.) Link, *E. muricata* (P.Beauv.) Fernald, *Lolium multiflorum* Lam., *Paspalum dilatatum* Poir. in Lam., *Poa annua* L., *Setaria faberi* R.A.W. Herm., and *Sorghum halepense* (L.) Pers.

2. *Grass/Forb Meadows*.—Plant species occurring in grass/forb meadows, which include hay fields, pastures, and wildlife food plots, have to withstand or escape the frequent grazing or mowing characteristic for this community. Some species escape this disturbance by growing close to the ground, such as *Galium pilosum* Aiton, *Hedyotis crassifolia* Raf., *Ranunculus pusillus* Poir., *Veronica persica* Poir., and *Kyllinga odorata* Vahl, whereas other species, such as *Panicum scoparium* Lam., *Trifolium arvense* L., or *T. pratense* L., persist even under heavy grazing. Another group of plants found in this community are early spring ephemerals, such as *Claytonia virginica* L. and *Nothoscordum bivalve* (L.) Britton.

Grass/forb meadow associations in the Interior Flatwoods physiographic region are characterized by such species as *Euthamia tenuifolia* (Pursh) Nutt., *Eupatorium rotundifolium* L., *Cardamine bulbosa* (Schreb. ex Muhl.) Britton, Sterns & Poggenb., *Cuscuta pentagona* Engelm. var. *pentagona*, *Euphorbia spathulata* Lam., *Hypericum punctatum* Lam., *Prunella vulgaris* L., *Trichostema brachiatum* L., *Hedyotis crassifolia* Raf., *Glyceria declinata* Bréb., and *Dichanthelium scoparium* (Lam.) Gould; moist depressions may hold such wetland species as *Ludwigia alternifolia* L., *L. hirtella* Raf., and *Gratiola neglecta* Torr.; noteworthy records from this association include *Asclepias hirtella* (Pennell) Woodson, which is listed as imperiled in the state (S2, MNHP 2002a).

In the Black Prairie physiographic region, species representative of grass/forb meadows include *Ruellia humilis* Nutt., *Silphium laciniatum* L., *Vernonia gigantea* (Walter) Trel. var. *gigantea*, *Lithospermum canescens* (Michx.) Lehm., *Opuntia humifusa* (Raf.) Raf., *Galium pilosum* Aiton, *Carex festucacea* Schkuhr ex Willd., and *Kyllinga odorata* Vahl; noteworthy collections from this association include *Armoracia lacustris* (A. Gray) Al-Shebaz & Bates and *Camassia*

scilloides Corey, which are listed as critically imperiled to imperiled (S1S2), and imperiled to rare and local (S2S3) in the state, respectively (MNHP 2002a).

3. *Roadsides*.—Roadsides are among the most interesting plant communities in Oktibbeha County, as they represent a conglomerate of floristic elements of diverse origins. Because roads are frequently associated with human habitation, both past and present, roadside plant communities often feature species that have escaped from or persist after cultivation. Examples in Oktibbeha County include *Catalpa bignonioides* Walter, *Wisteria sinensis* (Sims) DC., *Broussonetia papyrifera* (L.) L'Hér. ex Vent., *Populus alba* L., *Lycoris radiata* (L'Hér.) Herb., *Narcissus* spp., *Hemerocallis fulva* (L.) L., *Muscari neglectum* Guss. ex Ten., and *Belamcanda chinensis* (L.) DC. The high frequency of disturbance, e.g., mowing of rights-of-way, associated with roadsides also provides suitable habitat for a diverse array of native herbs and exotic weeds ("ruderals"). New introductions are likely to be seen first along roads that can provide far-reaching connections between seed source and suitable dispersal habitat. Examples of common native roadside species include *Bidens aristosa* (Michx.) Britton, *Cirsium horridulum* Michx., *Erigeron annuus* (L.) Pers., *Iva annua* L., *Senecio anonymus* Wood, *Acalypha virginica* L., *Chamaesyce maculata* (L.) Small, *Croton capitatus* Michx., *Desmanthus illinoensis* (Michx.) MacMill. ex B.L. Rob. & Fernald, *Lespedeza cuneata* (Dum.Cours.) G. Don, *Blephilia ciliata* (L.) Benth., *Hedeoma hispida* Pursh, *Prunella vulgaris* L., *Plantago rugelii* Decne., *Rumex hastatulus* Baldwin, *Carex frankii* Kunth, *C. triangularis* Boeck., *Dichanthelium laxiflorum* (Lam.) Gould & C.A. Clark, *D. scabriusculum* (Elliott) Gould & C.A. Clark, *Elymus virginicus* L., and *Tridens flavus* (L.) Hitchc. Exotics frequently encountered include *Daucus carota* L., *Torilis arvensis* (Huds.) Link, *Taraxacum officinale* Weber ex FH. Wigg., *Capsella bursa-pastoris* (L.) Medik., *Lonicera japonica* Thunb., *Cerastium glomeratum* Thuill., *Medicago lupulina* L., *Trifolium repens* L., *Lamium* spp., *Verbena brasiliensis* Vell., *Bothriochloa pertusa* (L.) A.Camus, *Setaria parviflora* (Poir.) Kerguelen, and *Sorghum halepense* (L.) Pers. Whereas the species mentioned thus far can be found along roads throughout the county, roadside communities, to a large degree, also reflect the plant communities that immediately surround them. Thus, roadsides in the Interior Flatwoods often feature such species as *Boltonia diffusa* Elliott, *Elephantopus carolinianus* Raeusch., *Acalypha rhomboidea* Raf., *Desmodium paniculatum* (L.) DC., *Lespedeza capitata* Michx., *Hypericum lobocarpum* Gatt., *Rhexia mariana* L. var. *mariana*, *Phlox pilosa* L., *Polygala sanguinea* L., *Aletris aurea* Walter, *Spiranthes vernalis* Engelm. & A. Gray, *Paspalum floridanum* Michx., *P. laeve* Michx., *Tridens strictus* (Nutt.) Nash in Small, and *Tripsacum dactyloides* (L.) L.; noteworthy collections from this association include *Asclepias hirtella* (Pennell) Woodson and *Lobelia appendiculata* A.DC., which are listed as imperiled (S2) and rare and local to apparently secure (S3S4) in the state, respectively (MNHP 2002a). Typical Black Prairie roadside species are *Aster novae-angliae* L., *A.*

praealtus Poir. var. *praealtus*, *A. undulatus* L., *Ratibida pinnata* (Vent.) Barnhart, *Rudbeckia fulgida* Aiton, *Silphium laciniatum* L., *Specularia perfoliata* (L.) A.DC., *Oenothera speciosa* Nutt., *Anemone caroliniana* Walter, *Penstemon laevigatus* Aiton, *Panicum capillare* L., and *P. dichotomiflorum* Michx.; noteworthy records include *Dasistoma macrophylla* (Nutt.) Raf. (rare and local to apparently secure-S3S4), *Penstemon tenuiflorus* Pennell (imperiled to rare and local-S2S3), *Tomanthera auriculata* (Michx.) Raf. (critically imperiled-S1), and *Spiranthes magnicamporum* Sheviak (S2S3, MNHP 2002a, 2002b).

4. *Urban Areas (including lawns)*.—The flora of urban areas is depauperate, and consists mostly of plants that have escaped from, are spreading from, or persist after cultivation; as well as weedy species that aggressively invade lawns, flower beds, sidewalks, and roadsides. Examples of local escapes include *Vinca major* L., *Ratibida columnifera* (Nutt.) Wooton & Standl., *Evonymus fortunei* (Turcz.) Hand.-Mazz., *Elaeagnus umbellata* Thunb., *Wisteria sinensis* (Sims) DC., *Populus alba* L., *Ailanthus altissima* (Mill.) Swingle, *Lycoris radiata* (L'Hér.) Herb., *Narcissus* spp., *Hemerocallis fulva* (L.) L., and *Hyacinthoides nonscripta* (L.) Chouard ex Rothm. Commonly found native species include such forbs as *Bowlesia incana* Ruiz & Pav., *Acmella oppositifolia* (Lam.) R.K. Jansen var. *repens* (Walter) R.K. Jansen, *Ambrosia trifida* L., *Hieracium gronovii* L., *Lactuca serriola* L., *Draba brachycarpa* Nutt. ex Torr & A. Gray, *Sagina decumbens* (Elliott) Torr & A. Gray, *Chamaesyce* spp., *Plantago* spp., *Rumex hastatulus* Baldwin, and *Ranunculus* spp.; as well as many graminoids, including *Cyperus* spp., *Fimbristylis annua* (All.) Roem. & Schult., *Kyllinga* spp., *Scirpus koilolepis* (Steud.) Gleason, *Juncus tenuis* Willd., *Axonopus fissifolius* (Raddi) Kuhlman, *Hordeum pusillum* Nutt., *Dichanthelium* spp., *Sphenopholis obtusata* (Michx.) Scribn., and *Urochloa ramosa* (L.) T.Q. Nguyen. Exotic weeds characteristic of urban areas include *Arctium minus* Bernh., *Centaurea cyanus* L., *Lactuca saligna* L., *Taraxacum officinale* Weber ex F.H. Wigg., *Youngia japonica* (L.) DC., *Brassica juncea* (L.) Czern., *Capsella bursa-pastoris* (L.) Medik., *Cardamine hirsuta* L., *Cerastium glomeratum* Thuill., *Stellaria media* (L.) Vill., *Medicago arabica* (L.) Huds., *Trifolium* spp., *Lamium* spp., *Sherardia arvensis* L., *Valerianella locusta* (L.) Betsche, *Verbena brasiliensis* Vell., and *Poa* spp.

ANNOTATED CHECKLIST

Species and lesser taxa are grouped by division, class, and family. Plant divisions and classes are arranged according to phylogeny following Flora of North America Editorial Committee (1993); families, and genera and species within families, are arranged alphabetically. Non-vascular plant family and genus concepts follow Schuster (1966, 1969, 1974, 1980) for Anthocerotopsida and Hepaticopsida. Vascular plant family and genus concepts follow Brummitt (1992). Nativity status is based on the USDA NRCS Plants database (<http://>

plants.usda.gov). Species names are followed by the authority, with abbreviations according to Brummitt and Powell (1992). In general, nomenclature follows Kartesz (1994), with the exception of Poaceae, which follow Barkworth et al. (In preparation). Synonyms are given in brackets where pertinent. The physiographic region/regions in which a species occurs is/are indicated by the abbreviations BP (Black Prairie), PR (Pontotoc Ridge), or IF (Interior Flatwoods), followed by the plant community/communities in which that species is found. Relative abundance within a plant community is listed as very abundant (AA), abundant (A), common (C), occasional (O), uncommon (U), rare (R), very rare (RR), or historical (H). A plant that is common, abundant, or very abundant, but local in distribution, is indicated with (l) following the abundance designation. The status of a species is indicated in **bold** as federally threatened (**FT**) or sensitive (**S**), which includes the designations critically imperiled (**S1**), imperiled (**S2**), rare and local (**S3**), apparently secure (**S4**), demonstrably secure (**S5**), of historical occurrence (**SH**), and of uncertain status (**SU**; MNHP 2002a, 2002b). This is followed by a literature citation or accession number, composed of collector name, collection number (with "R" indicating a recollection), and source/depository herbarium acronym (Holmgren et al. 1990). Collections of the senior author are cited first (no collector name given), followed by those of others (collector name given, in a list for first specimen only); absence of an herbarium acronym indicates the specimen is referenced at IBE. Species preceded by an asterisk (*) are non-native species. An ampersand (&) indicates the species is a new record for Mississippi.

BRYOPHYTA HEPATICOPSIDA

CEPHALOZIACEAE

Cephalozia bicuspidata (L.) Dumort., IF, lakes/ponds/impoundments, U; Woods (1964)

CEPHALOZIELLACEAE

Cephaloziella hampeana (Nees) Schiffn. ex Loeske, IF, U; Woods (1964)

GEOCALYCACEAE

Chiloscyphus pallescens (Ehrh.) Dumort., IF, rivers/creeks, U; Woods (1964)

Lophocolea bidentata (L.) Dumort., IF, lakes/ponds/impoundments, U; Woods (1964)

Lophocolea heterophylla (Schrad.) Dumort., IF, lakes/ponds/impoundments, C; Woods (1964)

Lophocolea minor Nees, IF, lakes/ponds/impoundments, C; Woods (1964)

JUBULACEAE

Frullania eboracensis Gottsche, PR, mesophytic upland hardwood forests, C; Woods (1964)

Frullania inflata Gottsche, IF, lakes/ponds/impoundments, U; Woods (1964)

Frullania kunzei Lehm. & Lindenb., IF, lakes/ponds/impoundments, U; Woods (1964)

Frullania squarrosa (Reinw., Bl. & Nees) Dumort., PR, mesophytic upland hardwood forests, A; Woods (1964)

JUNGERMANNIACEAE

Solenostoma pumilum (With.) K. Müll. [= *Jungermannia pumila* With.], IF, rivers/creeks, U; Woods (1964)

LEJEUNEACEAE

Cololejeunea minutissima (Smith) Schiffn., BP, prairie cedar woodlands, O; Woods (1964)

Leucolejeunea clypeata (Schwein.) A. Evans, IF, bottomland hardwood forests, C; Woods (1964)

Leucolejeunea unciloba (Lindenb.) A. Evans, IF, pine forests, C; Woods (1964)

PALLAVACINIACEAE

Pallavacinia lyellii (Hook.) Carruth., IF, lakes/ponds/impoundments, U; Woods (1964)

PORELLACEAE

Porella platyphylloidea (Schwein.) Lindenb., PR, mesophytic upland hardwood forests, C; Woods (1964)

RICCIACEAE

Riccia fluitans L., IF, lakes/ponds/impoundments, A; Woods (1964)

Riccia hirta (Austin) Underw., IF, roadsides, U; Woods (1964)

Riccia membranacea Gottsche & Lindenb., IF, rivers/creeks, C; Woods (1964)

Riccia sullivantii Austin, IF, rivers/creeks, C; Woods (1964)

SCAPANIACEAE

Scapania nemorosa (L.) Dumort., IF, lakes/ponds/impoundments, C; Woods (1964)

SPHAEROCARPACEAE

Sphaerocarpus texanus Austin, IF, grass/forb meadows, C; Woods (1964)

ANTHOCEROTOPSIDA

ANTHOCEROTACEAE

Anthoceros punctatus L., IF, lakes/ponds/impoundments, U; Woods (1964)

LYCOPODIOPHYTA

LYCOPODIACEAE

Lycopodiella alopecuroides (L.) Cranfill, IF, seepage areas, C; 651

Lycopodiella appressa (Chapm.) Cranfill, IF, seepage areas, roadsides, O/C; 482, 1557, McDaniel 24335

Lycopodiella prostrata (R.M. Harper) Cranfill, IF, seepage areas, C; 530

Lycopodium digitatum Dill. ex A. Braun, IF, pine forests, RR; McDaniel pers. obs.

SELAGINELLACEAE

Selaginella apoda (L.) Spring, IF, mesophytic upland hardwood forests, R; 914, 1298 (R914)

POLYPODIOPHYTA

ASPLENIACEAE

Asplenium platyneuron (L.) Oakes, BP, IF, pine forests, prairie cedar woodlands, O; 619, 720, 879, Evans (1978), Leidolf and McDaniel (1998)

AZOLLACEAE

Azolla caroliniana Willd., BP, lakes/ponds/impoundments (littoral/profundal-free-floating), A(I); McDaniel pers. obs.

BLECHNACEAE

Woodwardia areolata (L.) T. Moore, IF, mesophytic upland hardwood forests, pine-mixed hardwood forests, canals/drainage ditches (riparian-banks), seepage areas, O; 901, 1556, Evans (1978), Jones et al. (1969), McDaniel 22136, Ray 6793 (MISSA)

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn var. *pseudocaudatum* (Clute) A. Heller, IF, pine forests, seepage areas, O/A(I); 983, McDaniel 2442

DRYOPTERIDACEAE

Polystichum acrostichoides (Michx.) Schott, PR, IF, mesophytic upland hardwood forests, O; 338, Evans (1978), H.B.B. s.n. (MISSA), McDaniel 28886

OPHIOGLOSSACEAE

Botrychium biternatum (Sav.) Underw., PR, IF, bottomland hardwood forests, pine forests, O/C; 878, 971, Bennett s.n., Brooks 562, Evans (1978), Theriot et al. (1993)

Botrychium virginianum (L.) Sw., BP, PR, mesophytic upland hardwood forests, O; 1330, 1350, Jones et al. (1969), McDaniel 31022, Morris et al. (1993), Tracy s.n. (MISSA)

Ophioglossum crotalophoroides Walter; Evans (1978)

Ophioglossum engelmannii Prantl, BP, prairie cedar woodlands, A(I), **S1**; Evans (1978), McDaniel 10583

OSMUNDACEAE

Osmunda cinnamomea L., IF, mesophytic upland hardwood forests, O/C; 899, 1380 (R899), Evans (1978), Jones et al. (1969)

Osmunda regalis L., IF, mesophytic upland hardwood forests, O/C; 900, 1379 (R900)

POLYPODIACEAE

Pleopeltis polypodioides (L.) E.G. Andrews & Windham var. *michauxiana* (Weath.) E.G. Andrews & Windham in Windham, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O/C; 44, *Beal s.n.* (MISSA), *Channell s.n.* (MISSA), Evans (1978), Jones et al. (1969), Leidolf and McDaniel (1998), Morris et al. (1993), *Ray 8005* (MISSA), Theriot et al. (1993)

THELYPTERIDACEAE

**Macrothelypteris torresiana* (Gaudich.) Ching [= *Thelypteris torresiana* (Gaudich.) Alston], IF, bottomland hardwood forests, R; Theriot et al. (1993)

WOODSIACEAE

Athyrium filix-femina (L.) Roth ex Mert. ssp. *asplenioides* (Michx.) Farw., IF, mesophytic upland hardwood forests, C; 460, 659 (R460), *H.B.B. s.n.* (MISSA), Jones et al. (1969)

Onoclea sensibilis L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, O/C; 335, 913 (R335), Theriot et al. (1993)

PINOPHYTA**CUPRESSACEAE**

Juniperus virginiana L. var. *virginiana*, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, prairies, prairie cedar woodlands, chalk outcrops, R/AA; 6, 7, 1605, Bryson (1980), *Henry s.n.* (MISSA), Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

PINACEAE

Pinus echinata Mill., IF, pine forests, pine-mixed hardwood forests, O/C; 1377a

Pinus taeda L., BP, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, prairie cedar woodlands, chalk outcrops, O; Leidolf and McDaniel (1998), Theriot et al. (1993)

TAXODIACEAE

Taxodium distichum (L.) L.C. Rich, IF, swamp forests, C; *Leidolf s.n.*

MAGNOLIOPHYTA**MAGNOLIOPSIDA****ACANTHACEAE**

Dicliptera brachiata (Pursh) Spreng., IF, bottomland hardwood forests, A; *Smith 946*

Justicia ovata (Walter) Lindau var. *lanceolata* (Chapm.) R.W. Long, IF, bottomland hardwood forests, swamp forests, canals/drainage ditches (riparian-banks), seepage areas, C(I); 359, 536, 1577, Theriot et al. (1993)

Ruellia caroliniensis (J.F. Gmel.) Steud., BP, IF, bottomland hardwood forests, prairie cedar woodlands, seepage areas, roadsides, O/C; 496, 1561, Leidolf and McDaniel (1998), Theriot et al. (1993)

Ruellia humilis Nutt., BP, prairies, grass/forb meadows, O/C; 366, Leidolf and McDaniel (1998), *McDaniel 13447*, Morris et al. (1993)

Ruellia strepens L., BP, PR, mesophytic upland hardwood forests, roadsides, O/C; 278, *McDaniel 31326*, Morris et al. (1993)

ACERACEAE

Acer barbatum Michx., PR, mesophytic upland hardwood forests, C(I); 1337, Morris et al. (1993)

Acer negundo L., BP, PR, IF, bottomland hardwood forests, rivers/creeks (riparian-banks), O; 226, *Askew 25*, Morris et al. (1993), Theriot et al. (1993)

Acer rubrum L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, C; 25, 35, 129 (R25), Morris et al. (1993), Theriot et al. (1993)

AMARANTHACEAE

Amaranthus albus L., BP, cultivated fields; *MacDonald 10885*

Amaranthus hybridus L., BP, cultivated fields, C(I)/A; 896, *Bryson 3448b*, *Gasparini 201*, *McDaniel 28083*

Amaranthus rudis J.D. Sauer, BP, chalk outcrops, cultivated fields, roadsides, C(I)/A; 682, 815, *Bryson 3450*, *McDaniel 22196*, 31332

Amaranthus spinosus L., BP, IF, cultivated fields, grass/forb meadows, C(I); 897, *Clonts 1406*

Amaranthus viridis L., BP, cultivated fields, C(I); 894

ANACARDIACEAE

Rhus aromatica Aiton, BP, mesophytic upland hardwood forests, prairies, prairie cedar woodlands, chalk outcrops, A; 186, 389, 788 (R186), 1327 (R389), 1342 (R186), Leidolf and McDaniel (1998), *MacDonald* 7528, *McDaniel* 25016, Pullen et al. (1968b), *Smith* 1410, 1896, 1936

Rhus copallinum L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, O; 445, Theriot et al. (1993)

Rhus glabra L., BP, PR, IF, pine forests, prairies, prairie cedar woodlands, roadsides, A(I); 301, 644, Leidolf and McDaniel (1998), *McDaniel* 13464, 31647, Morris et al. (1993)

Rhus radicans L. [= *Toxicodendron radicans* (L.) Kuntze ssp. *radicans*], PR, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, C; 472, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Rhus toxicodendron L. [= *Toxicodendron pubescens* Mill.], BP, prairie cedar woodlands, O; 431

ANNONACEAE

Asimina triloba (L.) Dunal, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, A(I) 120, 353 (R120), 666, *Askew* 31, *Gordon* 2059 (MMNS), *Leidolf s.n.*, Morris et al. (1993), Theriot et al. (1993)

APIACEAE (UMBELLIFERAE)

Bowlesia incana Ruiz & Pav., PR, urban areas, A(I); 1215, *Maddux* 1287

Chaerophyllum tainturieri Hook., BP, roadsides, C; 158, *Lowe* (1921)

Ciclospermum leptophyllum (Pers.) Sprague ex Britton & Wilson, BP, cultivated fields; *Bryson* 1349

Cicuta maculata L., IF, seepage areas, A(I); 1543

Cryptotaenia canadensis (L.) DC., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, pine-mixed hardwood forests, O; 308, 391, 1515

Cynosciadium digitatum DC., BP, roadsides; *Sundell* 1542

**Daucus carota* L., BP, IF, prairies, roadsides, C; 239, Leidolf and McDaniel (1998), Pullen et al. (1968b)

Eryngium prostratum Nutt. ex DC., IF, bottomland hardwood forests, mesophytic upland hard-

wood forests, pine forests, lakes/ponds/impoundments (riparian–mudflats), seepage areas, U; 334, 498, 561, 1585 (R334), *Bryson* 674, *Copeland s.n.*

Eryngium yuccifolium Michx. var. *yuccifolium*, IF, seepage areas, R; 566, 653

Osmorhiza longistylis (Torr.) DC., PR, **S3**; *Green s.n.* (MISSA)

Perideridia americana (Nutt. ex DC.) Reichenb., BP, prairies, **S1/S2**; *Brooks* 150

Polytaenia nuttallii DC., PR, **S2**; *Baker* 57 (MISSA), *Lott s.n.* (MISSA)

Ptilimnium capillaceum (Michx.) Raf., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, canals/drainage ditches (riparian–banks), seepage areas, O/C; 332, 464, *Bryson* 719, *Clonts* 818

Ptilimnium nuttallii (DC.) Britt., BP, IF, seepage areas, grass/forb meadows, urban areas, O; 500, *MacDonald* 7289, *McDaniel* 13494

Sanicula canadensis L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O; 302, *Bryson* 720, Leidolf and McDaniel (1998), *Lowe* (1921), Morris et al. (1993), Theriot et al. (1993)

Sanicula odorata (Raf.) K.M. Pryer & L.R. Phillippe, PR, mesophytic upland hardwood forests, O; Morris et al. (1993)

Sanicula smallii E.P. Bicknell, IF, mesophytic upland hardwood forests, O; 340

Spermolepis inermis (Nutt. ex DC.) Mathias & Constance, BP, prairies, O/C; 1512, *MacDonald* 8719

Taenidia integerrima (L.) Drude, PR, mesophytic upland hardwood forests, **S1**; *Gordon* 2034

Thaspium barbinode (Michx.) Nutt., PR, mesophytic upland hardwood forests, C; *Gordon* 2037

Thaspium trifoliatum (L.) A. Gray, BP, PR, IF, bottomland hardwood forests, rivers/creeks (riparian–banks), O; 356, *Lowe* (1921), *McDaniel* 24966, Morris et al. (1993), Theriot et al. (1993)

**Torilis arvensis* (Huds.) Link, BP, PR, prairies, roadsides, C; 1502, *Clonts* 816, *McDaniel* 13461, Pullen et al. (1968b)

Trepocarpus aethusae Nutt. ex DC., BP, canals/drainage ditches (riparian–banks), seepage areas, O; 313, *Lowe* (1921)

Zizia aurea (L.) W.D.J. Koch, BP, bottomland hardwood forests, O; 105

APOCYNACEAE

Amsonia ornata McDaniel in ed., BP, canals/drainage ditches (riparian-banks), seepage areas, A(l); 209, McDaniel 29755

Amsonia tabernaemontana Walter, IF, bottomland hardwood forests, O; Leidolf pers. obs., Theriot et al. (1993)

Apocynum cannabinum L., BP, IF, prairies, pine forests, A(l); 1517, Brooks 130, McDaniel 13463

Trachelospermum difforme (Walter) A. Gray, IF, bottomland hardwood forests, pine forests, C(l) 1497, Brooks 397, Theriot et al. (1993)

**Vinca major* L., BP, urban areas, A(l); 1448

AQUIFOLIACEAE

&**Ilex cornuta* Lindl. & Paxton, PR, mesophytic upland hardwood forests, R; 887

Ilex decidua Walter, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, prairies, prairie cedar woodlands, chalk outcrops, roadsides, C; 38, 40, 946, Askew 69a, Clonts s.n., Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Ilex opaca Aiton, BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, C; 951, Laird 22, Theriot et al. (1993)

ARALIACEAE

Aralia spinosa L., IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, roadsides, C(l); 586, Theriot et al. (1993)

Panax quinquefolius L., BP, PR, mesophytic upland hardwood forests, R, **S3**; Bryson 8830, Morris et al. (1993), Smith 1415

ARISTOLOCHIACEAE

Aristolochia tomentosa Sims, IF, bottomland hardwood forests, rivers/creeks (riparian-banks), U; Smith 542a, Theriot et al. (1993), Timme 5435

Asarum canadense L., PR, mesophytic upland hardwood forests, C, **S2S3**; Harrelson 21 (MISSA)

ASCLEPIADACEAE

Asclepias amplexicaulis Small, IF, xeric upland hardwood forests, R; 1546

Asclepias hirtella (Pennell) Woodson, IF, pine forests, grass/forb meadows, roadsides, C(l), **S2**;

1563, Bryson 681, 6001, 7000, Ray 4751 (MISSA), Stauffer s.n. (MISSA)

Asclepias purpurascens L., **S1**; Easley s.n. (MISSA)

Asclepias tuberosa L., BP, IF, prairies, pine forests, roadsides, C(l); 291, 853, 1536, Bryson 679, 703, Leidolf and McDaniel (1998), McDaniel 31093, Morris et al. (1993)

Asclepias variegata L., IF, roadsides; Copeland s.n.

Asclepias verticillata L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, roadsides, U; 919, Clonts 827, Gordon 2039

Asclepias viridiflora Raf., BP, prairies, R/C; 1508, 1526, 1602, Leidolf and McDaniel (1998), McDaniel 13455, 31098, Morris et al. (1993)

Asclepias viridis Walter, BP, IF, prairies, chalk outcrops, roadsides, C/A; 204, 1457 (R204), 1525, Brooks 148, Carter 3017, Leidolf and McDaniel (1998), McDaniel 29757, 31035, 31067, Morris et al. (1993), Sundell 1536

Matelea gonocarpos (Walter) Shinnars, BP, PR, IF, bottomland hardwood forests, pine-mixed hardwood forests, xeric upland hardwood forests, cultivated fields, R; 1527, 1574, Bryson 2599, 2600, McDaniel 31066, Theriot et al. (1993)

ASTERACEAE (COMPOSITAE)

**Achillea millefolium* L., BP, prairies, O; McDaniel 13492

Acmella oppositifolia (Lam.) R.K. Jansen var. *repens* (Walter) R.K. Jansen, PR, urban areas, RR; McDaniel 12494

Ambrosia artemisiifolia L., IF, bottomland hardwood forests, roadsides, C/A(l); 984, Brooks 483, Theriot et al. (1993), Wigley 314085

Ambrosia bidentata Michx., IF, roadsides, C; 915

Ambrosia psilostachya DC., BP, IF, pine forests, prairies, prairie cedar woodlands, chalk outcrops, C/A; 789, Leidolf and McDaniel (1998), McDaniel 15463, 22929

Ambrosia trifida L., BP, prairies, urban areas, C/A; 993, Brooks 468, McDaniel 24964, Wigley 313093

Amphiachyris dracunculoides (DC.) Nutt., BP, prairies, AA(l), **S1**; McDaniel 22927

Antennaria plantaginifolia (L.) Richardson, BP, IF, xeric upland hardwood forests, roadsides, O; 1262, 1535

**Arctium minus* Bernh., BP, PR, cultivated fields, urban areas, O; 706, Bryson 3078

- Aster attenuatus* Lindl. ex Hook., BP, prairies, O/C(I); 1015, *MacDonald* 8145
- Aster cordifolius* L. var. *sagittifolius* (Wedem. ex Willd.) A.G. Jones, PR, bottomland hardwood forests, O; Morris et al. (1993)
- Aster dumosus* L., BP, PR, IF, bottomland hardwood forests, pine forests, prairies, C; 961, 991, *Copeland s.n.*, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993), *Wigley* 314104
- Aster ericoides* L., BP, prairies, C(I), **S2**; 1004, 1009a, 1011, Leidolf and McDaniel (1998), *MacDonald* 8142, 8152
- Aster laevis* L., BP, prairies, O; 933, Leidolf and McDaniel (1998)
- Aster novae-angliae* L., BP, prairies, cultivated fields, roadsides, O/C; 1005, 1007, 1019, *Gasparini* 208, Leidolf and McDaniel (1998), *McDaniel* 1044
- Aster paludosus* Aiton ssp. *hemisphericus* (Alexander) Cronquist, BP, IF, pine forests, prairies, seepage areas, roadsides, O/A(I); 650, 654, *Brooks* 410, *Bryson* 6986, *Clonts* 571, *Copeland s.n.*
- Aster patens* Aiton, BP, IF, pine forests, prairies, chalk outcrops, O; 968, Leidolf and McDaniel (1998), Morris et al. (1993)
- Aster pilosus* Willd. var. *pilosus*, BP, IF, prairies, cultivated fields, O; 990, Leidolf and McDaniel (1998), *Gasparini* 207, *Wigley* 313124
- Aster praealtus* Poir. var. *praealtus*, BP, prairies, roadsides, O/C; 1009, 1012, Leidolf and McDaniel (1998), *MacDonald* 8149
- Aster sericeus* Vent. var. *microphyllus* DC., BP, prairies, R/C(I); 1013, Leidolf and McDaniel (1998), *MacDonald* 8147
- Aster solidagineus* Michx., IF, pine forests, pine-mixed hardwood forests, seepage areas, roadsides, C(I); 349, 529, 1494, 1540, *Bruza* 929, *Bryson* 684, *Clonts* 831
- Aster subulatus* Michx. var. *ligulatus* Shinnery, PR, urban areas; *McDaniel* 12528
- Aster undulatus* L., BP, prairies, prairie cedar woodlands, roadsides, U/C(I); 1003, 1008, 1014, Leidolf and McDaniel (1998), *MacDonald* 8143, 8148, 8151
- Baccharis halimifolia* L., BP, IF, bottomland hardwood forests, lakes/ponds/impoundments (riparian-banks), roadsides, C(I); *Clonts* 472, *McDaniel* 31324, 31325, Theriot et al. (1993), *Wigley* 313120
- Bidens aristosa* (Michx.) Britton, BP, IF, bottomland hardwood forests, pine forests, roadsides, O; 873, *Brooks* 482, *Copeland s.n.*, Theriot et al. (1993), *Wigley* 314083
- Bidens discoidea* (Torr. & A. Gray) Britton, IF, bottomland hardwood forests, swamp forests; *Stewart* 269, Theriot et al. (1993)
- Boltonia diffusa* Elliott, IF, pine forests, roadsides, O; 664, *Copeland s.n.*
- Brickellia eupatorioides* (L.) Shinnery var. *eupatorioides*, BP, IF, chalk outcrops, C(I); *McDaniel* 2193, 31310
- Brintonia discoidea* (Elliott) Greene, IF, bottomland hardwood forests, pine forests, roadsides, O; 922, Theriot et al. (1993)
- Cacalia ovata* Walter [= *Arnoglossum ovatum* (Walter) H. Rob.], IF, mesophytic upland hardwood forests, O; 902
- Cacalia plantaginea* (Raf.) Shinnery [= *Arnoglossum plantagineum* Raf.], BP, prairies, R/A; 375, 1445 (R375), Leidolf and McDaniel (1998), *McDaniel* 13456, 31074, Morris et al. (1993)
- **Centaurea cyanus* L., PR, urban areas, RR; *McDaniel* 13442
- Chrysopsis mariana* (L.) Elliott, IF, mesophytic upland hardwood forests, roadsides, O/C; 954, *Mathies* 867
- **Cichorium intybus* L., BP, roadsides, RR; 680
- Cirsium discolor* (Muhl. ex Willd.) Spreng., BP, prairies, chalk outcrops, lakes/ponds/impoundments (riparian-banks), O; 823, 832, *Wigley* 313092
- Cirsium horridulum* Michx., BP, IF, prairies, prairie cedar woodlands, roadsides, O; 1438, 1455, Leidolf and McDaniel (1998)
- Coreopsis lanceolata* L., BP, prairies, chalk outcrops, roadsides, C(I); 200, 268, 1451, Leidolf and McDaniel (1998)
- Coreopsis pubescens* Elliott, BP, IF, pine forests, prairies, roadsides; 343, *Brooks* 122, 143, *McDaniel* 1089
- Coreopsis tinctoria* Nutt., IF, roadsides, urban areas, C; 1573, *Copeland s.n.*
- Coreopsis tripteris* L., IF, roadsides, C(I); 658, *Brooks* 494
- **Crepis pulchra* L., BP, urban areas, O; 1450

- Dracopis amplexicaulis* (Vahl) Cass., BP, IF, prairies, roadsides, C; 289, 396, *Copeland s.n.*, Leidolf and McDaniel (1998), *Sundell* 1548
- Echinacea purpurea* (L.) Moench, PR, xeric upland hardwood forests, **S354**; *Ray* 4715 (MISSA)
- Eclipta prostrata* (L.) L., BP, IF, bottomland hardwood forests, pine forests, canals/drainage ditches (riparian–banks), lakes/ponds/impoundments (riparian–mudflats), seepage areas, cultivated fields, C/A; 609, *Brooks* 481, *Bryson* 3423, *McDaniel* 31333, Theriot et al. (1993)
- Elephantopus carolinianus* Raeusch., IF, bottomland hardwood forests, pine forests, roadsides, O/A; 806, 877, *Lowe* (1921), *Smith* 945, Theriot et al. (1993)
- Elephantopus tomentosus* L., IF, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, lakes/ponds/impoundments (riparian–banks), C; 1582, *Brooks* 488, *Carraway* 174, *McDaniel* 9797, 15726
- Erechtites hieracifolia* (L.) Raf. ex DC., IF, bottomland hardwood forests; Theriot et al. (1993)
- Erigeron annuus* (L.) Pers., BP, PR, roadsides, O/A; 1503, *Carter* 3015
- Erigeron canadensis* L. [= *Conyza canadensis* (L.) Cronquist var. *canadensis*], BP, PR, IF, prairies, roadsides, C; 551, 1597, *McDaniel* 31625, *Wigley* 313062
- Erigeron philadelphicus* L., IF, seepage areas, O; 138
- Erigeron strigosus* Muhl. ex Willd., BP, IF, bottomland hardwood forests, xeric upland hardwood forests, prairies, chalk outcrops, O; 203, 470, *Bryson* 716, *Clonts* 828, Leidolf and McDaniel (1998)
- Eupatorium altissimum* L., BP, prairies, chalk outcrops, roadsides, O/A; 803, Leidolf and McDaniel (1998), *McDaniel* 20934, 22928, 28077, 31649
- Eupatorium capillifolium* (Lam.) Small, IF, pine forests, urban areas; *Copeland s.n.*, *Snow* 39
- Eupatorium coelestinum* L., BP, IF, bottomland hardwood forests, pine forests, chalk outcrops, lakes/ponds/impoundments (riparian–banks), roadsides, C/A(I); 528, 958, *Bryson* 706, *Lowe* (1921), *McDaniel* 31319, *Wigley* 313098
- Eupatorium hyssopifolium* L., IF, pine forests, O; 700
- Eupatorium incarnatum* Walter, BP, C; *McDaniel* 31322
- Eupatorium perfoliatum* L., IF, pine forests, O/C; 811, *Brooks* 475, *Copeland s.n.*
- Eupatorium rotundifolium* L., IF, grass/forb meadows, roadsides, A; 471, *Clonts* 841, *Mathies* 841
- Eupatorium rugosum* Houtt. [= *Ageratina altissima* (L.) King & H. Rob. var. *altissima*], BP, IF, bottomland hardwood forests, C; 972, *McDaniel* 31328, Theriot et al. (1993)
- Eupatorium scabridum* Elliott [= *E. rotundifolium* L. var. *scabridum* (Elliott) Gray], IF, pine forests, roadsides, O; 655, *Wigley* 314088
- Eupatorium semiserratum* DC., IF, mesophytic upland hardwood forests, pine forests, O; 555, *Wigley* 314087
- Eupatorium serotinum* Michx., BP, IF, pine forests, chalk outcrops, seepage areas, C(I)/A; 683, *Copeland s.n.*, *McDaniel* 22192, 22932
- Euthamia leptcephala* (Torr. & A. Gray) Greene, IF, pine forests; *Wigley* 314105
- Euthamia tenuifolia* (Pursh) Nutt., PR, IF, pine forests, grass/forb meadows, O; 848, 875
- Evax prolifera* Nutt. ex DC., BP, prairies, AA(I), **S1**; 195, 1442 (*R195*), Leidolf and McDaniel (1998)
- **Facelis retusa* (Lam.) Sch. Bip., PR, IF, roadsides, urban areas, C(I); 1317, 1504
- Gnaphalium helleri* Britton, IF, pine forests, O; 955
- Gnaphalium obtusifolium* L., BP, IF, bottomland hardwood forests, pine forests, R/O; *McDaniel* 1560, 31644, Theriot et al. (1993)
- Gnaphalium purpureum* L. [= *Gamochaeta purpurea* (L.) Cabrera], PR, IF, pine-mixed hardwood forests, seepage areas, roadsides, urban areas, O/C; 180, 1290, *McDaniel* 15072, *Wigley* 313126
- Helenium amarum* (Raf.) H. Rock, BP, IF, roadsides, A; 394, *Wigley* 312046
- Helenium autumnale* L., BP, IF, bottomland hardwood forests, pine forests, prairie cedar woodlands, chalk outcrops, cultivated fields, O; 830, *Copeland s.n.*, *Gasparini* 209, Leidolf and McDaniel (1998), *McDaniel* 1435, 15731, 31315, Theriot et al. (1993)
- Helenium flexuosum* Raf., IF, mesophytic upland hardwood forests, O; 444, *McDaniel* 2540
- Helianthus angustifolius* L., IF, roadsides, A(I); 872, *Mathies* 840

- Helianthus annuus* L., BP, roadsides, A(I); 397
- Helianthus divaricatus* L., BP, prairie cedar woodlands, O; 427
- Helianthus giganteus* L., IF, roadsides, O; 881
- Helianthus hirsutus* Raf., IF, pine forests, grass/forb meadows, O; 577, *Clonts* 840
- Helianthus mollis* Lam., IF, pine forests, O; 589, 699
- Helianthus silphioides* Nutt., IF, pine-mixed hardwood forests, O; 808, *Brooks* 489, *McDaniel* 1433
- Helianthus strumosus* L., BP, prairies, roadsides, O; 927, Leidolf and McDaniel (1998), *McDaniel* 15508
- Heliopsis gracilis* Nutt., IF, mesophytic upland hardwood forests, O; 336
- Heterotheca camporum* (Greene) Shinnars, BP, prairies, chalk outcrops, C/A; 796, 841, 1596, Leidolf and McDaniel (1998), *MacDonald* 8146, *McDaniel* 22925, Morris et al. (1993)
- Hieracium gronovii* L., IF, pine forests, urban areas, O/C(I); 648, *McDaniel* 2195, 2196
- Iva annua* L., BP, IF, prairies, roadsides, A(I); 992, *Copeland s.n.*, *McDaniel* 31630
- Krigia dandelion* (L.) Nutt., PR, IF, roadsides, O; 175, *Askew* 48
- Krigia cespitosa* (Raf.) K.L. Chambers, BP, PR, cultivated fields, roadsides, O; 179, *Bryson* 3499
- Lactuca canadensis* L., BP, IF, xeric upland hardwood forests, prairies, lakes/ponds/impoundments (riparian-banks), roadsides, C; *Carraway* 175, *McDaniel* 30273, *Wigley* 312049
- Lactuca floridana* (L.) Gaertn., BP, IF, bottomland hardwood forests, prairie cedar woodlands, roadsides, O; 838, Leidolf and McDaniel (1998), Theriot et al. (1993)
- Lactuca hirsuta* Muhl. ex Nutt., IF; *Bryson* 677
- **Lactuca saligna* L., BP, PR, xeric upland hardwood forests, prairies, urban areas, O; *MacDonald* 9897, *McDaniel* 30271
- **Lactuca serriola* L., PR, urban areas, O; 1598
- **Leucanthemum vulgare* Lam., BP, urban areas, C(I); 1447, 1463
- Liatris aspera* Michx., BP, IF, prairies, roadsides, A; 516, 615 (*R516*), *Copeland s.n.*, Leidolf and McDaniel (1998)
- Liatris spicata* (L.) Willd., BP, IF, pine forests, pine-mixed hardwood forests, prairies, R/U; 515, 563, *Clonts s.n.*, Leidolf and McDaniel (1998), *McDaniel* 2660
- Liatris squarrosa* (L.) Michx., BP, prairies, chalk outcrops, R/A; 370, *Clonts s.n.*, Leidolf and McDaniel (1998), *McDaniel* 15505, Morris et al. (1993)
- Liatris squarrosa* Michx., BP, IF, prairies, chalk outcrops, roadsides, R/O; 969, Leidolf and McDaniel (1998), *McDaniel* 22924
- Mikania scandens* (L.) Willd., BP, IF, bottomland hardwood forests, chalk outcrops, lakes/ponds/impoundments (riparian-banks), roadsides, C/A(I); 585, *Brooks* 479, *McDaniel* 22167, Theriot et al. (1993), *Wigley* 314084
- Pityopsis graminifolia* (Michx.) Nutt., IF, seepage areas, C; 868
- Pluchea camphorata* (L.) DC., BP, IF, bottomland hardwood forests, canals/drainage ditches (riparian-banks), lakes/ponds/impoundments (riparian-mudflats), seepage areas, C; 849, Theriot et al. (1993), *Wigley* 313100
- Prenanthes altissima* L., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)
- Prenanthes aspera* Michx., BP, prairies, O, **S2**; Leidolf and McDaniel (1998), *McDaniel* 15622
- Pyrrhopappus carolinianus* (Walter) DC., IF, pine forests, O; 574, 579, *Bryson* 726
- Pyrrhopappus pauciflorus* (D. Don) DC., BP, prairies, roadsides, O; *McDaniel* 31072, *Sundell* 1548
- **Ratibida columnifera* (Nutt.) Wooton & Standl., PR, urban areas, RR; *Smith s.n.*
- Ratibida pinnata* (Vent.) Barnhart, BP, prairies, prairie cedar woodlands, chalk outcrops, roadsides, O; 424, *Copeland s.n.*, Leidolf and McDaniel (1998), *McDaniel* 13445, Morris et al. (1993)
- Rudbeckia fulgida* Aiton, BP, prairies, roadsides, O; 844, Leidolf and McDaniel (1998)
- Rudbeckia hirta* L., BP, bottomland hardwood forests, xeric upland hardwood forests, prairies, O/A; 282, *Bryson* 723, *Clonts* 823, Leidolf and McDaniel (1998), *McDaniel* 31073, 31619
- Rudbeckia laciniata* L., IF, bottomland hardwood forests; *Brooks* 564
- Senecio anonymus* Wood, BP, IF, pine forests, roadsides, urban areas, C; 255, 1441, 1449, *McDaniel* 13216, 29753, 31031
- Senecio glabellus* Poir., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, roadsides, C; 133, 1372, *Smith* 1932, Theriot et al. (1993)
- Senecio obovatus* Muhl. ex Willd., BP, chalk out-

- crops, O; McDaniel 31032, Morris 3097, Morris et al. (1993)
- Silphium integrifolium* Michx., PR, roadsides, C; Leidolf pers. obs. (with 1001)
- Silphium laciniatum* L., BP, chalk outcrops, grass/forb meadows, roadsides, C; 392, Clonts s.n., Leidolf and McDaniel (1998), Morris et al. (1993)
- Silphium laciniatum* L. × *S. terebinthinaceum* Jacq., BP, roadsides, RR; 852
- Silphium perfoliatum* L., BP, IF, rivers/creeks (riparian-banks), roadsides, O; 625, 687, McDaniel 25285, 28877
- Silphium perfoliatum* L. × *S. trifoliatum* L. var. *latifolium* A. Gray, BP, roadsides, RR; 837
- Silphium terebinthinaceum* Jacq., BP, PR, bottomland hardwood forests, prairies, O; 843, Leidolf and McDaniel (1998), Morris et al. (1993)
- Silphium trifoliatum* L. var. *latifolium* A. Gray, BP, prairies, chalk outcrops, C; 517, 622, McDaniel 15502
- Solidago caesia* L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, O/C(I); 953, Theriot et al. (1993)
- Solidago canadensis* L. var. *scabra* Torr. & A. Gray, BP, IF, pine forests, chalk outcrops, roadsides, O/C; 956, Copeland s.n., McDaniel 28076, Wigley 313119
- Solidago gigantea* Aiton, BP, IF, pine forests, prairies, chalk outcrops, O; 824, Brooks 316, McDaniel 31314
- Solidago hispida* Muhl. ex Willd., IF, pine-mixed hardwood forests, C; McDaniel 14665
- Solidago juncea* Aiton, IF; Wigley 312050
- Solidago nemoralis* Aiton var. *haleana* Fernald, IF; Bryson 678
- Solidago nemoralis* Aiton var. *nemoralis*, BP, IF, bottomland hardwood forests, prairies, chalk outcrops, lakes/ponds/impoundments (riparian-banks), roadsides, O/C; 792, Carraway 176, Leidolf and McDaniel (1998), Theriot et al. (1993)
- Solidago odora* Aiton var. *odora*, IF, pine forests, O/C; 962, Copeland s.n., McDaniel 2192
- Solidago petiolaris* Aiton, IF, pine forests, C; McDaniel 15727
- Solidago rigida* L., BP, prairies, C; 790, Leidolf and McDaniel (1998)
- Solidago rugosa* Mill. ssp. *aspera* (Aiton) Cronquist, IF, pine-mixed hardwood forests, roadsides, O/C; Copeland s.n., Mathies 844, McDaniel 9795, 14663
- Solidago ulmifolia* Muhl. ex Willd., BP, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, prairies, O/C; 596, 638, Leidolf and McDaniel (1998), McDaniel 31631, Morris et al. (1993), Theriot et al. (1993)
- **Soliva sessilis* Ruiz & Pav., PR, urban areas, O; 1214
- **Sonchus asper* (L.) Hill, BP, roadsides, O; 1339, 1464
- **Sonchus oleraceus* L., BP, roadsides, O; 1459
- **Taraxacum officinale* Weber ex F.H. Wigg., BP, PR, bottomland hardwood forests, prairie cedar woodlands, roadsides, urban areas, O; 1268, Leidolf and McDaniel (1998), Morris et al. (1993), Wigley 313111
- Verbesina alternifolia* (L.) Britton ex Kearney, IF, bottomland hardwood forests, roadsides, C; 973, 1537, Brooks 563, Theriot et al. (1993)
- Verbesina helianthoides* Michx., IF, pine forests, roadsides, C(I); Brooks 277, Bruza 936
- Verbesina virginica* L., BP, chalk outcrops, lakes/ponds/impoundments (riparian-banks), roadsides, O/A; 836, McDaniel 1491, 31321
- Vernonia gigantea* (Walter) Trel. ssp. *gigantea*, BP, PR, IF, bottomland hardwood forests, pine forests, grass/forb meadows, roadsides, O/C; 578, 628, Bruza 1001, McDaniel 22930, Morris et al. (1993)
- **Xanthium strumarium* L., BP, IF, lakes/ponds/impoundments (riparian-banks), cultivated fields, grass/forb meadows, R/A(I); 819, Clonts 1404, McDaniel 31329, Wigley 313099
- **Youngia japonica* (L.) DC., BP, urban areas, O; 1520

BALSAMINACEAE

Impatiens capensis Meerb.; Jones (1976b)

BERBERIDACEAE

&**Mahonia bealei* (Fortune) Carrière, PR, mesophytic upland hardwood forests, R; 886, 1307

&**Nandina domestica* Thunb., PR, mesophytic upland hardwood forests, R; 889

Podophyllum peltatum L., PR, IF, mesophytic upland hardwood forests, AA(I); 88, 99, 1308, Askew 41, Morris et al. (1993)

BETULACEAE

Betula nigra L., IF, bottomland hardwood forests, rivers/creeks (riparian-banks), lakes/ponds/impoundments (riparian-banks); Anderson s.n. (MISSA), Hansbrough s.n. (MISSA)

BIGNONIACEAE

- Bignonia capreolata* L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O/C; 134, Askew 60, McDaniel 2355, Morris et al. (1993), Theriot et al. (1993)
- Campsis radicans* (L.) Seem. ex Bureau, BP, PR, IF, bottomland hardwood forests, pine-mixed hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, C; 300, 345, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)
- Catalpa bignonioides* Walter, IF, rivers/creeks (riparian-banks), roadsides, O; 1492, Clonts 748

BORAGINACEAE

- **Buglossoides arvensis* (L.) I.M. Johnst., BP, roadsides, A(I); 144
- Cynoglossum virginianum* L., PR, mesophytic upland hardwood forests, A(I); 1332, Jones (1976b), Morris et al. (1993)
- **Heliotropium indicum* L., IF, bottomland hardwood forests, pine forests, urban areas; Clonts 1405, Copeland s.n., Jones (1976b), Theriot et al. (1993)
- Heliotropium tenellum* (Nutt.) Torr., BP, prairies, chalk outcrops, O/A; 368, Jones (1976b), Leidolf and McDaniel (1998), MacDonald 7529, McDaniel 15507, 31088, 31313, Morris et al. (1993), Pullen et al. (1968b)
- Lithospermum canescens* (Michx.) Lehm., BP, prairies, chalk outcrops, grass/forb meadows, roadsides, O/C(I); 210, 1269, Bryson 414, Jones (1976b), Leidolf and McDaniel (1998), McDaniel 31015, Morris 3096, Morris et al. (1993)
- Lithospermum latifolium* Michx., PR, mesophytic upland hardwood forests; Gordon 2064
- Lithospermum tuberosum* Rugel ex DC., PR, mesophytic upland hardwood forests, O/C; 1331, Jones (1976b), Smith 1933
- Myosotis macrosperma* Engelm., PR, mesophytic upland hardwood forests, O; 1334, 1352, Jones (1976b)
- Myosotis verna* Nutt., BP, cultivated fields; Bryson 3484, Jones (1976b)
- Onosmodium molle* Michx. ssp. *hispidissimum* (Mack.) B. Boivin, BP, prairies, O; 1603, Jones (1976b), McDaniel 31064, Morris et al. (1993)

BRASSICACEAE (CRUCIFERAE)

- **Arabidopsis thaliana* (L.) Heynh.; Jones (1975a)

- Armoracia lacustris* (A. Gray) Al-Shehbaz & Bates, BP, grass/forb meadows, O, **S1S2**; McDaniel 25025
- **Brassica erucastrum* L. [= *Erucastrum gallicum* (Willd.) O.E. Schulz], BP, chalk outcrops, O/C; 78, 465, 1461, McDaniel 24994, Smith 1448
- **Brassica juncea* (L.) Czern., PR, urban areas, RR; 1325
- **Brassica napus* L., PR, roadsides, RR; 1260
- **Capsella bursa-pastoris* (L.) Medik., BP, PR, cultivated fields, roadsides, urban areas, C; 63, Bryson 3488, Stewart 128
- Cardamine bulbosa* (Schreb. ex Muhl.) Britton, Sterns & Poggenb., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, grass/forb meadows, O; 90, 1333, 1377, Askew 45, Jones (1975a)
- Cardamine concatenata* (Michx.) Sw., PR, mesophytic upland hardwood forests, O; 151, Morris 3091, Morris et al. (1993)
- **Cardamine hirsuta* L., PR, urban areas, A; 23, 1209, Jones (1975a), Stewart 145
- Cardamine parviflora* L.; Jones (1975a)
- **Coronopus didymus* (L.) Small, PR, IF, pine forests, urban areas, O; 1205, Copeland and Warren s.n.
- Draba brachycarpa* Nutt. ex Torr. & A. Gray, BP, prairies, urban areas, A; 1266
- Draba cuneifolia* Nutt. ex Torr. & A. Gray, BP, prairies, C(I); McDaniel 10415
- **Lepidium perfoliatum* L., BP, urban areas, RR; Ray s.n. (MISSA)
- Lepidium virginicum* L., BP, prairies, cultivated fields, roadsides, A; 199, 395, 1287
- **Raphanus raphanistrum* L., PR, roadsides, O; 76
- Rorippa sessiliflora* (Nutt.) Hitchc., BP, PR, canals/drainage ditches (riparian-banks), cultivated fields, grass/forb meadows, urban areas, R/C; 1305, Bryson 7420, McDaniel 24753, 25027
- Sibara virginica* (L.) Rollins, BP, cultivated fields, roadsides, A; 1272, 1279, Bryson 3490, Jones (1975a)
- **Sisymbrium officinale* (L.) Scop.; Jones (1975a)
- **Thlaspi perfoliatum* L., BP, roadsides, C; McDaniel 33025

BUDDLEJACACEAE

- Polypremum procumbens* L., BP, IF, xeric upland hardwood forests, canals/drainage ditches (riparian-banks), seepage areas, cultivated fields, roadsides, urban areas, C(I); 441, 1570, Bryson 2612, McDaniel 1503

CABOMBACEAE

Brasenia schreberi J.F. Gmel., IF, lakes/ponds/impoundments (littoral-rooted-floating), A(l) 580, 657

CACTACEAE

Opuntia humifusa (Raf.) Raf., BP, PR, grass/forb meadows, roadsides, R; 813, 940

CALLITRICHACEAE

Callitriche heterophylla Pursh, IF, canals/drainage ditches (submergent), lakes/ponds/impoundments (littoral-submergent), seepage areas, C(l); 126, *McDaniel* 10491

CAMPANULACEAE

Campanula americana L. [= *Campanulastrum americanum* (L.) Small], BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, roadsides, O/C(l); 624, 822, 1604, *MacDonald* 9720, *McDaniel* 28888, 31640, Morris et al. (1993), *Smith* 1411

Lobelia appendiculata A. DC., IF, pine-mixed hardwood forests, roadsides, A(l), **S2S3**; 322, 342, 363, 364

Lobelia cardinalis L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-mudflats), lakes/ponds/impoundments (riparian-mudflats), R/C; 812, 944, 980, *Bruza* 1332, Theriot et al. (1993)

Lobelia puberula Michx., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, pine-mixed hardwood forests, seepage areas, roadsides, O; 524a, 809, 957, *Clonts* 572, *McDaniel* 31621, Theriot et al. (1993)

Lobelia spicata Lam., BP, prairies, O; 295, Leidolf and *McDaniel* (1998), *McDaniel* 15511, Morris et al. (1993)

Specularia biflora (Ruiz & Pav.) Fisch. & C.A. Mey. [= *Triodanis perfoliata* (L.) Nieuwl. var. *biflora* (Ruiz & Pav.) Bradley], IF, bottomland hardwood forests, O; 230

Specularia perfoliata (L.) A. DC. [= *Triodanis perfoliata* (L.) Nieuwl. var. *perfoliata*], BP, prairies, roadsides, O; 1361, 1454, 1465, *Brooks* 155, Lowe (1921), *McDaniel* 31013

CANNABACEAE

**Cannabis sativa* L., IF, roadsides, RR; 807

CAPRIFOLIACEAE

**Lonicera japonica* Thunb., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, pine forests, pine-mixed hardwood forests, rivers/creeks (riparian-banks), roadsides, C; 215, *Brooks* 129, Leidolf and *McDaniel* (1998), Morris et al. (1993), Theriot et al. (1993)

Lonicera sempervirens L., PR, xeric upland hardwood forests, R; 1366

Sambucus canadensis L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, canals/drainage ditches (riparian-banks), C; 309, Morris et al. (1993), Theriot et al. (1993)

Symphoricarpos orbiculatus Moench, BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, roadsides, O/C; 799, *McDaniel* 1501, 31650, Morris et al. (1993)

Triosteum angustifolium L., PR, mesophytic upland hardwood forests, R/C, **S3**; *Channell* s.n. (MISSA), *Funchess* s.n. (MISSA), *Hull* s.n. (MISSA), *Rainwater* s.n. (MISSA), *Ray* 931 (MISSA), *Smith* 1934

Viburnum rufidulum Raf., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O; 114, 150, 160, Leidolf and *McDaniel* (1998), Morris et al. (1993)

CARYOPHYLLACEAE

**Arenaria serpyllifolia* L., BP, roadsides, A(l); *McDaniel* 29754

**Cerastium brachypetalum* Desportes, BP, roadsides, C; 71a

**Cerastium glomeratum* Thuill., BP, PR, cultivated fields, roadsides, urban areas, C/A; 71, 1211, *Bryson* 3486

Sagina decumbens (Elliott) Torr. & A. Gray, BP, PR, xeric upland hardwood forests, urban areas, C/A; 1277, 1357

Silene antirrhina L., BP, IF, grass/forb meadows, roadsides, O/A; 1485, *Bryson* 8862, Pullen et al. (1968b)

Silene stellata (L.) W.T. Aiton, PR, IF, mesophytic upland hardwood forests, O; 885, *McDaniel* 28885, Morris et al. (1993)

**Spergula arvense* L., BP, cultivated fields, A; 1286

**Stellaria media* (L.) Vill., PR, urban areas, A; 10, 1212

CELASTRACEAE

Evonymus americanus L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), roadsides, O; 259, 945, Bryson 728, Morris et al. (1993), Theriot et al. (1993)

Evonymus atropurpureus Jacq., PR, mesophytic upland hardwood forests, RR, **S2S3**; Morris 3086, Morris et al. (1993)

**Evonymus fortunei* (Turcz.) Hand. -Mazz., PR, urban areas, RR; MacDonald 9994

CISTACEAE

Lechea mucronata Raf., IF, grass/forb meadows, O; 1586

Lechea tenuifolia Michx., IF, pine forests, seepage areas, roadsides, C(l); 485, 573, 1534, McDaniel 13489

CONVOLVULACEAE

Cuscuta compacta Juss. ex Choisy; Anonymous s.n. (MISSA)

Cuscuta pentagona Engelm. var. *pentagona*, BP, IF, prairies, grass/forb meadows, A(l); 428, 942

**Ipomoea hederacea* Jacq., BP, cultivated fields, C/A; 821, Bryson 2598

Ipomoea lacunosa L., BP, cultivated fields, C/A; 820, Bryson 2597

Ipomoea pandurata (L.) G. Mey., BP, cultivated fields, A; 519

**Ipomoea wrightii* A. Gray, IF, cultivated fields, A(l); 711

Jacquemontia tamnifolia (L.) Griseb., IF, lakes/ponds/impoundments (riparian-mudflats), grass/forb meadows, roadsides, O; 598, Clonts 1407

CORNACEAE

Cornus drummondii C.A. Mey., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, chalk outcrops, roadsides, O; 274, 620, Bryson 8294, Carter 3005, Leidolf and McDaniel (1998), McDaniel 31068, Morris et al. (1993)

Cornus florida L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, C; 124, 351, 964, Askew 39, Morris et al. (1993), Theriot et al. (1993)

Cornus stricta Lam. [= *C. foemina* Mill.], IF, bottom-

land hardwood forests, O; 244, McDaniel 1562, Theriot et al. (1993)

Nyssa sylvatica Marshall, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, C; 1482, Smith 2540, Theriot et al. (1993)

CORYLACEAE

Carpinus caroliniana Walter, IF, bottomland hardwood forests, C; 234

Ostrya virginiana (Mill.) K. Koch, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; Leidolf s.n., Morris et al. (1993)

CRASSULACEAE

Sedum pulchellum Michx., BP, PR, chalk outcrops, R, **S1**; Brent 181, Stauffer s.n. (MISSA)

CUCURBITACEAE

Cayaponia quinqueloba (Raf.) Shinnery; Jones (1976b), Pullen et al. (1968b)

Melothria pendula L., BP, PR, IF, lakes/ponds/impoundments (riparian-banks), roadsides, C; 705, 724, Jones (1976b), McDaniel 31327

DROSERACEAE

Drosera brevifolia Pursh, IF, seepage areas, R; 1289, 1437 (R1289)

EBENACEAE

Diospyros virginiana L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, prairie cedar woodlands, chalk outcrops, O; 1462, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

ELAEAGNACEAE

**Elaeagnus pungens* Thunb., PR, mesophytic upland hardwood forests, O; 888

**Elaeagnus umbellata* Thunb., PR, urban areas, RR; 1324

ERICACEAE

Monotropa hypopithys L., PR, mesophytic upland hardwood forests, R; Morris et al. (1993)

Monotropa uniflora L., IF; Stewart 116

Rhododendron canescens (Michx.) Sweet, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O/C; 125, 130, Askew 40, Leidolf s.n., Theriot et al. (1993)

Vaccinium arboreum Marshall, BP, IF, bottomland

hardwood forests, swamp forests, xeric upland hardwood forests, pine forests, O; 1359, 1550, Brooks 132, Carter 3020, Clonts 830, McDaniel 1091, Theriot et al. (1993)

Vaccinium elliotii Chapm., IF, bottomland hardwood forests, pine-mixed hardwood forests, O; 36, Theriot et al. (1993)

Vaccinium elliotii Chapm. × *V. fuscatum* Aiton, IF, bottomland hardwood forests, RR; Theriot et al. (1993)

Vaccinium stamineum L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, R/C; 593, 665, 1291, 1351(R665), 1381, Brooks 120, Theriot et al. (1993)

Vaccinium virgatum Aiton, IF, bottomland hardwood forests; McDaniel 3000

ESCALLONIACEAE

Itea virginica L., IF, bottomland hardwood forests, swamp forests, lakes/ponds/impoundments (riparian-banks), O; 265, McDaniel 1828

EUPHORBIACEAE

Acalypha gracilens A. Gray, IF, seepage areas, O; 649

Acalypha ostryifolia Riddell, BP, IF, prairies, cultivated fields, roadsides, C; 794, 1544, Gasparini 203, Pullen et al. (1968b)

Acalypha rhomboidea Raf. [= *A. virginica* L. var. *rhomboidea* (Raf.) Cooperr.], IF, rivers/creeks (riparian-banks), roadsides, O; 686

Acalypha virginica L., BP, IF, chalk outcrops, lakes/ponds/impoundments (riparian-banks), roadsides, O; 600, 630, Brooks 485, McDaniel 22197, Pullen et al. (1968b)

Chamaesyce humistrata (Engelm.) Small, BP, chalk outcrops, C; McDaniel 22201

Chamaesyce maculata (L.) Small, BP, PR, IF, chalk outcrops, rivers/creeks (riparian-banks), cultivated fields, roadsides, urban areas, C; 423, 544, 690, McDaniel 2202, 22199

Chamaesyce nutans (Lag.) Small, BP, IF, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), cultivated fields, O/A; 504, Brooks 469, Bryson 3443, MacDonald 7, McDaniel 31627

Chamaesyce prostrata (Aiton) Small, BP, PR, cultivated fields, urban areas, C; Bryson 3445, McDaniel 2203, Stewart 151

Chamaesyce serpens (Kunth) Small, BP, chalk outcrops, C; McDaniel 22198

Croton capitatus Michx., BP, IF, pine-mixed hardwood forests, prairies, roadsides, C; 379, 565, Brooks 323

Croton glandulosus L. var. *septentrionalis* Müll. Arg., IF, pine-mixed hardwood forests, roadsides, C(l); 538, Brooks 319

Croton monanthogynus Michx., BP, prairies, chalk outcrops, cultivated fields, C/A(l); 367, Bryson 8315, Leidolf and McDaniel (1998), McDaniel 1492, 24447, 31317, 31629, Morris et al. (1993), Pullen et al. (1968b)

Euphorbia commutata Engelm., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)

Euphorbia corollata L., BP, IF, xeric upland hardwood forests, pine forests, prairies, chalk outcrops, roadsides, C; 281, 641, Brooks 144, 318, Bryson 8296, Leidolf and McDaniel (1998), McDaniel 15622a, Morris et al. (1993)

Euphorbia dentata Michx., IF, rivers/creeks (riparian-banks), O; 684, Pullen et al. (1968b)

Euphorbia heterophylla L., BP, prairies, A; McDaniel 15620

Euphorbia spathulata Lam., BP, IF, prairies, prairie cedar woodlands, grass/forb meadows, O; 1346, 1511, Morris 3081, Morris et al. (1993)

Tragia cordata Michx., BP, PR, IF, xeric upland hardwood forests, R; 1528, McDaniel 28890

Tragia urticifolia Michx., BP, prairies, O; 1519, McDaniel 31632, Morris et al. (1993), Pullen et al. (1968b)

FABACEAE (LEGUMINOSAE)

**Albizia julibrissin* Durazz., PR, roadsides, C; 462

Amorpha fruticosa L., BP, IF, bottomland hardwood forests, xeric upland hardwood forests, roadsides, O; 271, 643, McDaniel 31026, Theriot et al. (1993)

Amphicarpaea bracteata (L.) Fernald, IF, mesophytic upland hardwood forests, O; 904

Apios americana Medik., BP, PR, prairie cedar woodlands, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), O/A(l); 677, 1606, McDaniel 28926

Apios priceana B.L. Rob., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, C(l), **FT, S1**; Gordon 2050, 2051, Morris 3100, Morris et al. (1993)

- Astragalus canadensis* L. var. *canadensis*, BP, U; **S2**; Gordon 2048
- Baptisia alba* (L.) R. Br. var. *macrophylla* (Larisey) Isley, IF, lakes/ponds/impoundments (riparian-banks), roadsides, O; 1471, 1568
- Centrosema virginianum* (L.) Benth., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), roadsides, O; 533, 674, Bruza 1007, McDaniel 28883
- Cercis canadensis* L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairies, prairie cedar woodlands, rivers/creeks (riparian-banks), C; 64, 74, 201, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)
- Chamaecrista fasciculata* (Michx.) Greene, BP, IF, pine forests, prairies, urban areas, C; 365, Brooks 315, Leidolf and McDaniel (1998)
- Chamaecrista nictitans* (L.) Moench, IF, pine forests, O; Brooks 408
- Clitoria mariana* L., IF, pine forests, lakes/ponds/impoundments (riparian-banks), O; 637, Brooks 317, Copeland s.n.
- **Coronilla varia* L., BP, roadsides; Brooks 210, MacDonald 10888
- Crotalaria sagittalis* L., BP, IF, prairies, seepage areas, O; 297, 701, Leidolf and McDaniel (1998)
- Dalea candida* Willd., BP, prairies, chalk outcrops, C/A; 284, Bruza 938, Leidolf and McDaniel (1998), McDaniel 13457, 31094, Morris et al. (1993)
- Dalea purpurea* Vent., BP, prairies, chalk outcrops, R/A; 283, Bruza 939, Leidolf and McDaniel (1998), McDaniel 13459, 31095, 31101, Morris et al. (1993)
- Desmanthus illinoensis* (Michx.) MacMill. ex B.L. Rob. & Fernald, BP, IF, xeric upland hardwood forests, prairies, canals/drainage ditches (riparian-banks), roadsides, O; 398, 642, Clonts s.n., Leidolf and McDaniel (1998), Wigley 315064
- Desmodium canescens* (L.) DC., BP, IF, bottomland hardwood forests, rivers/creeks (riparian-banks), O; 678, Theriot et al. (1993)
- Desmodium ciliare* (Muhl. ex Willd.) DC., BP, xeric upland hardwood forests, prairies, chalk outcrops, O/C; 793, Leidolf and McDaniel (1998), McDaniel 1502, 15504, Wigley 315067
- Desmodium cuspidatum* (Muhl. ex Willd.) DC. ex Loudon, PR, bottomland hardwood forests, O; Morris et al. (1993)
- Desmodium glabellum* (Michx.) DC., IF, seepage areas, roadsides, O; 986
- Desmodium glutinosum* (Muhl. ex Willd.) Alph. Wood, PR, IF, mesophytic upland hardwood forests, O/C; 560, McDaniel 28884
- Desmodium laevigatum* (Nutt.) DC., IF, pine forests; Brooks 473
- Desmodium nudiflorum* (L.) DC., PR, IF, mesophytic upland hardwood forests, C; 559, Morris et al. (1993)
- Desmodium paniculatum* (L.) DC., IF, pine forests, roadsides, O; 858, Wigley 314113
- Desmodium pauciflorum* (Nutt.) DC., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)
- Desmodium perplexum* B.G. Schub., BP, PR, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), O; 670, 834
- Desmodium rotundifolium* DC., IF, mesophytic upland hardwood forests, C(I); 907, 1581(R907)
- Dioclea multiflora* (Torr. & A. Gray) C. Mohr, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 331, 557(R331), Bryson 721, Clonts 473, Theriot et al. (1993)
- Galactia volubilis* (L.) Britton, BP, IF, prairies, seepage areas, O; 518, 532, Bruza 924
- Gleditsia triacanthos* L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, roadsides, O; Leidolf s.n., Morris et al. (1993), Theriot et al. (1993)
- **Kummerowia striata* (Thunb.) Schindl., IF, pine forests, roadsides, A; 545, Brooks 409, Wigley 314023
- **Lathyrus hirsutus* L., BP, IF, prairies, lakes/ponds/impoundments (riparian-banks), canals/drainage ditches (riparian-banks), roadsides, O; 316, 1470, Brooks 152, Pullen et al. (1968b), Sundell 1549
- **Lespedeza bicolor* Turcz., IF, mesophytic upland hardwood forests, O; 443
- Lespedeza capitata* Michx., IF, pine forests, seepage areas, roadsides, U; 867, 921
- **Lespedeza cuneata* (Dum. Cours.) G. Don, BP, IF, pine forests, prairies, prairie cedar woodlands, rivers/creeks (riparian-banks), road-

- sides, C; 569, 676, Leidolf and McDaniel (1998), McDaniel 15509
- Lespedeza procumbens* Michx., BP, chalk outcrops, C(l); McDaniel 31316, 31648
- Lespedeza repens* (L.) Barton, IF, pine forests, roadsides, O; 570, Brooks 496, Lowe (1921)
- Lespedeza violacea* (L.) Pers., IF, pine forests; *Copeland s.n.*, Lowe (1921)
- Lespedeza virginica* (L.) Britton, BP, IF, xeric upland hardwood forests, pine forests, O; 702, Brooks 399, McDaniel 31624, Wigley 314086
- **Medicago arabica* (L.) Huds., BP, PR, cultivated fields, urban areas, U; 1206, 1288, Lowe (1921)
- **Medicago lupulina* L., BP, PR, prairies, roadsides, C; 75, McDaniel 31091, Pullen et al. (1968b)
- **Melilotus alba* Medik., BP, prairies, chalk outcrops, roadsides, C/A; 287, Brooks 142, Leidolf and McDaniel (1998), McDaniel 13451, 31096, Morris et al. (1993)
- **Melilotus officinalis* (L.) Lam. [= *Melilotus albus* Medik.], BP, roadsides, C; 292
- Neptunia lutea* (Leavenw.) Benth., BP, prairies, prairie cedar woodlands, O/A(l), **S354**; 299, 399, 426, 466, Channell 73 (MISSA), Davis s.n. (MISSA), Leidolf and McDaniel (1998), McDaniel 13460, Morris et al. (1993), Smith 1412
- Psoralea psoralioides* (Walter) Cory [= *Orbexilum pedunculatum* (Mill.) Rydb. var. *psoralioides* (Walt.) Isely], BP, IF, pine forests, seepage areas, roadsides, U/C; 272, 1439, McDaniel 3147
- Rhynchosia tomentosa* (L.) Hook. & Arn., BP, IF, prairies, grass/forb meadows, urban areas, O; 1589, 1600, McDaniel 31634
- Robinia pseudoacacia* L., PR, roadsides, urban areas, O; 1321
- Schrankia microphylla* (Dryand.) J.F. Macbr. [= *Mimosa quadrivalvis* L. var. *angustata* (Torr. & A. Gray) Barneby], IF, pine forests, pine-mixed hardwood forests, roadsides, O/C; 330, Bruza 928, McDaniel 13488
- Senna marilandica* (L.) Link, IF, bottomland hardwood forests; Theriot et al. (1993)
- **Senna obtusifolia* (L.) Irwin & Barneby, IF, lakes/ponds/impoundments (riparian-banks), C; 604
- Sesbania exaltata* (Raf.) Rydb. ex A.W. Hill, BP, IF, rivers/creeks (riparian-banks), seepage areas, roadsides, C(l); 704, McDaniel 25286
- Strophostyles helvula* (L.) Elliott, IF, pine forests, O; 595
- Strophostyles umbellata* (Muhl. ex Willd.) Britton, IF, pine forests, O/C; 698, Brooks 495, Copeland s.n., McDaniel 2191
- Stylosanthes biflora* (L.) Britton, Sterns & Poggenb., IF, mesophytic upland hardwood forests, O; 339, Wigley 312048
- Tephrosia spicata* (Walter) Torr. & A. Gray, IF, pine-mixed hardwood forests, roadsides, C(l); 319, 1567, Clonts 820
- Tephrosia virginiana* (L.) Pers., IF, pine forests, pine-mixed hardwood forests, O; 346, 531, Brooks 279
- **Trifolium arvense* L., BP, grass/forb meadows; O'Brein s.n. (MISSA), Locke s.n. (MISSA)
- **Trifolium campestre* Schreb., PR, IF, roadsides, urban areas, C; 1311, 1315, 1323
- **Trifolium dubium* Sibth., BP, PR, prairie cedar woodlands, O; 223, Pullen et al. (1968b)
- **Trifolium incarnatum* L., PR, roadsides, A(l); 100, Pullen et al. (1968b)
- **Trifolium lappaceum* L., BP, PR, prairies, roadsides, urban areas, C; 1514, 1533a, Brooks 145, MacDonald 8721, Morris et al. (1993)
- **Trifolium pratense* L., BP, prairies, grass/forb meadows, roadsides, C(l); 164, Brooks 147, Sundell 1544, Wigley 313011
- Trifolium reflexum* L., IF, pine forests, C(l); McDaniel 21235
- **Trifolium repens* L., BP, PR, IF, roadsides, urban areas, C; 405, Askew 37, Wigley 314080
- **Trifolium resupinatum* L., BP, prairies, roadsides, O; 145, Brooks 153, Pullen et al. (1968b)
- Vicia caroliniana* Walter, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 248, 1296 (R248), Morris et al. (1993)
- **Vicia grandiflora* Scop., BP, IF, cultivated fields, roadsides, O; 139, 1283, Pullen et al. (1968b)
- Vicia minutiflora* F. Dietr., PR, xeric upland hardwood forests, O; Ray 8006 (MISSA)
- **Vicia sativa* L. ssp. *nigra* (L.) Ehrh., IF, roadsides, O; 137, Pullen et al. (1968b)
- **Vicia tetrasperma* (L.) Schreb., PR, canals/drainage ditches (riparian-banks); Fletcher s.n. (MISSA)
- **Vicia villosa* Roth ssp. *varia* (Host) Corb., BP, PR, roadsides, O; 178, Brooks 209, Pullen et al. (1968b)
- Wisteria frutescens* (L.) Poir., IF, lakes/ponds/impoundments (riparian-banks), R; 636

**Wisteria sinensis* (Sims) DC., IF, roadsides, urban areas, O/C; 91, Askew 38 (R Leidolf 91)

FAGACEAE

Fagus grandifolia Ehrh., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, C; 475, 952, 1583 (R952), Laird 6, Theriot et al. (1993)

Quercus alba L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, C; 306, 1554, Theriot et al. (1993)

Quercus durandii Buckley [= *Q. sinuata* Walter var. *sinuata*], BP, bottomland hardwood forests; McDaniel 1067

Quercus falcata Michx., IF, bottomland hardwood forests, xeric upland hardwood forests, pine forests, pine-mixed hardwood forests, C; 1551, Theriot et al. (1993)

Quercus laurifolia Michx., IF, bottomland hardwood forests, O; Leidolf pers. obs., Theriot et al. (1993)

Quercus lyrata Walter, IF, bottomland hardwood forests, swamp forests, rivers/creeks (riparian-banks), C; 355, Leidolf s.n., Theriot et al. (1993)

Quercus macrocarpa Michx., BP, xeric upland hardwood forests, R, **S2**; 1526a, Bryson 3123, McDaniel 32330, Smith 364

Quercus marilandica Muenchh., BP, IF, xeric upland hardwood forests, prairie cedar woodlands, C; 387, 1553, Leidolf and McDaniel (1998), Morris et al. (1993)

Quercus michauxii Nutt., IF, bottomland hardwood forests, C; Leidolf s.n., Theriot et al. (1993)

Quercus muehlenbergii Engelm., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, O; 435, Bryson 3124, 7440, Leidolf and McDaniel (1998), McDaniel 28151, 31646, Morris et al. (1993)

Quercus nigra L., BP, IF, bottomland hardwood forests, xeric upland hardwood forests, pine forests, pine-mixed hardwood forests, O; Leidolf s.n., McDaniel 31612a, Theriot et al. (1993)

Quercus pagoda Raf., BP, IF, bottomland hardwood forests, xeric upland hardwood forests,

O; 1458, Leidolf s.n., McDaniel 31613, Theriot et al. (1993)

Quercus phellos L., BP, IF, bottomland hardwood forests, pine forests, prairie cedar woodlands, lakes/ponds/impoundments (riparian-banks), C; 982, 1592, Leidolf s.n., Leidolf and McDaniel (1998), Theriot et al. (1993)

Quercus rubra L., BP, IF, bottomland hardwood forests, O; Laird 29, Leidolf s.n., Theriot et al. (1993)

Quercus shumardii Buckley, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, C; 354, 1555, Bryson 3126, Leidolf s.n., McDaniel s.n., Morris et al. (1993), Theriot et al. (1993)

Quercus stellata Wangenh., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine-mixed hardwood forests, prairie cedar woodlands, C; 305, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Quercus texana Buckley, IF, bottomland hardwood forests, O; Leidolf s.n., Theriot et al. (1993)

Quercus velutina Lam., BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, R; 307, McDaniel 31614

GENTIANACEAE

Frasera caroliniensis Walter, PR, mesophytic upland hardwood forests, U/A(I), **S2S3**; Morris 3099, Morris et al. (1993), Ray 6724

Sabatia angularis (L.) Pursh, BP, prairies, prairie cedar woodlands, chalk outcrops, O; 372, Morris et al. (1993)

Sabatia brachiata Elliott, IF, pine-mixed hardwood forests, roadsides, O/C; 347, 1539, McDaniel 2534

GERANIACEAE

Geranium carolinianum L., BP, lakes/ponds/impoundments (riparian-banks), roadsides, C; 189, McDaniel 31050

**Geranium dissectum* L., BP, roadsides, C; 157

Geranium maculatum L., PR, mesophytic upland hardwood forests, O; Smith 1931

HALORAGACEAE

**Myriophyllum aquaticum* (Vell.) Verdc.; Jones (1975b)

HAMAMELIDACEAE

Hamamelis virginiana L., IF, bottomland hardwood forests, O; 975, Theriot et al. (1993)

Liquidambar styraciflua L., BP, PR, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, xeric upland hardwood forests, C; 333, Bryson (1980), McDaniel 31615, Morris et al. (1993), Theriot et al. (1993)

HIPPOCASTANACEAE

Aesculus × *bushii* Schneid. [= *A. pavia* L. × *A. glabra* Willd.], BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), O/C; 109, 112, Bennett 2 (UTC), 3 (UTC), 4 (UTC), 5 (UTC), 6 (UTC), 7 (UTC), Morris et al. (1993)

Aesculus glabra Willd., BP, PR, bottomland hardwood forests, rivers/creeks (riparian-banks), C(I), **S2?**; 72, 108, 111, 128, 438, 1270, Askew 32, Carpenter s.n. (MISSA), Channell s.n. (MISSA), Funchess s.n. (MISSA), Graham s.n. (MISSA), Lowe (1921), McDaniel 1066, Morris 3084, Morris et al. (1993), Persons s.n. (MISSA), Read s.n. (MISSA), Smith 1895, Tracy s.n. (MISSA), Webb 80 (MISSA)

Aesculus pavia L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), C; 65, 110, 119, McDaniel 1069, 31027a, Morris et al. (1993), Theriot et al. (1993)

HYDRANGEACEAE

Hydrangea quercifolia W. Bartram, IF, bottomland hardwood forests, pine-mixed hardwood forests, R; 1498, Bryson 732, Laird 16

HYDROPHYLLACEAE

Hydrolea uniflora Raf., IF, rivers/creeks (emergent), lakes/ponds/impoundments (littoral-emergent), A(I); 576, 725, Jones (1975b), McDaniel 20935

HYPERICACEAE (GUTTIFERAE)

Hypericum crux-andreae (L.) Crantz, IF, pine-mixed hardwood forests, seepage areas, O/C; 647, Brooks 403, McDaniel 2659

Hypericum drummondii (Grev. & Hook.) Torr. & A. Gray, IF, roadsides, O/C; 719, McDaniel 1568, 2028

Hypericum gentianoides (L.) Britton, Sterns & Poggenb., IF, seepage areas, roadsides, A(I); 645, Bryson 729

Hypericum gymnanthum Engelm. & A. Gray, IF, canals/drainage ditches (riparian-banks), O; 503

Hypericum hypericoides (L.) Crantz, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, seepage areas, C; 874, 1481, Brooks 404, Theriot et al. (1993)

Hypericum lobocarpum Gatt., IF, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), lakes/ponds/impoundments (riparian-banks), seepage areas, roadsides, O/C; 547, 588, 985, 1566, Clonts 832, McDaniel 1434

Hypericum mutilum L., IF, bottomland hardwood forests, pine-mixed hardwood forests, canals/drainage ditches (riparian-banks), C; 477, 562, Brooks 402, Theriot et al. (1993)

Hypericum punctatum Lam., IF, bottomland hardwood forests, canals/drainage ditches (riparian-banks), grass/forb meadows, O; 715, 1588, Theriot et al. (1993)

Hypericum sphaerocarpum Michx., BP, prairies, chalk outcrops, C(I); 374, Leidolf and McDaniel (1998), MacDonald 8718, McDaniel 31049, Morris et al. (1993), Smith 1413

Hypericum stragulum W.P. Adams & E. Robson [= *H. hypericoides* (L.) Crantz ssp. *multicaule* (Michx. ex Willd.) E. Robson], IF, grass/forb meadows, R; 1549

Triadenum tubulosum (Walter) Gleason, IF, bottomland hardwood forests; Theriot et al. (1993)

Triadenum walteri (J.G. Gmel.) Gleason, IF, bottomland hardwood forests, O; 908, Theriot et al. (1993)

JUGLANDACEAE

Carya carolinae-septentrionalis (Ashe) Engl. & Graebn., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; Morris et al. (1993), Pullen et al. (1968b), Theriot et al. (1993)

Carya cordiformis (Wangenh.) K. Koch, IF, bottomland hardwood forests, O; Leidolf s.n., Theriot et al. (1993)

Carya glabra (Mill.) Sweet, IF, bottomland hardwood forests, xeric upland hardwood forests, pine forests, O; 1552, Theriot et al. (1993)

Carya laciniosa (F. Michx.) G. Don, BP, bottomland hardwood forests, RR, **S2S3**; 161, McDaniel 3490

- Carya leiodermis* Sarg. [= *C. glabra* (Mill.) Sweet var. *hirsuta* (Ashe) Ashe], IF, bottomland hardwood forests, **S2S3**; *Brooks* 565, Theriot et al. (1993)
- Carya myristiciformis* (F. Michx.) Nutt., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, O; *McDaniel* 4233, 4324, Morris et al. (1993)
- Carya ovalis* (Wangenh.) Sarg., IF, bottomland hardwood forests; Theriot et al. (1993)
- Carya ovata* (Mill.) K. Koch, IF, bottomland hardwood forests; Theriot et al. (1993)
- Carya pallida* (Ashe) Engl. & Graebn., BP, roadsides, O; 939
- Carya tomentosa* (Lam. ex Poir.) Nutt. [= *C. alba* (L.) Nutt. ex Elliott], BP, IF, bottomland hardwood forests, xeric upland hardwood forests, pine forests, pine-mixed hardwood forests, O; *McDaniel* 31612, Theriot et al. (1993)
- Juglans nigra* L., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, U; 1513, Morris et al. (1993)

LAMIACEAE (LABIATAE)

- Blephilia ciliata* (L.) Benth., BP, PR, prairies, chalk outcrops, roadsides, C; 269, 1444, *Brooks* 149 (MMNS), *Carter* 3013, Leidolf and McDaniel (1998), *McDaniel* 31043, 31069, Morris et al. (1993), *Smith* 2036
- Collinsonia tuberosa* Michx., IF, bottomland hardwood forests, O; 906, *McDaniel* 26487
- Hedeoma hispida* Pursh, BP, PR, IF, prairies, roadsides, O/A(I); 1505, Leidolf and McDaniel (1998), *McDaniel* 1820, Pullen et al. (1968b)
- **Lamium amplexicaule* L., BP, PR, roadsides, urban areas, A; 9, 80, Jones (1976a), *Stewart* 247
- **Lamium purpureum* L., BP, PR, roadsides, urban areas, C/A(I); 59, 142, 1210, *Askew* 35, *McDaniel* 1588
- Lycopus rubellus* Moench, IF; *McDaniel* 1566
- Lycopus virginicus* L., IF, bottomland hardwood forests, rivers/creeks (riparian-mudflats); *McDaniel* 1437, *Smith* 943, Theriot et al. (1993)
- **Mentha × rotundifolia* (L.) Huds. (pro sp.), IF, grass/forb meadows, A(I); *MacDonald* 10902
- Monarda citriodora* Cerv. ex Lag., BP, prairies, rivers/creeks (riparian-banks), O; 369, Jones (1976a), *Bryson* 3077, Leidolf and McDaniel (1998), Morris et al. (1993), Pullen et al. (1968b)

- Monarda fistulosa* L., IF, roadsides, C; *Bruza* 931, Jones (1976a)
- Physostegia angustifolia* Fern., BP, IF, canals/drainage ditches (emergent), seepage areas, roadsides, A(I); 312, 1541
- Physostegia virginiana* (L.) Benth., Jones (1976a)
- Prunella vulgaris* L., BP, IF, pine forests, prairies, prairie cedar woodlands, grass/forb meadows, roadsides, C; 174, 184, 235, 1443, *Brooks* 133, Jones (1976a), Leidolf and McDaniel (1998), *Stewart* 502
- Pycnanthemum albescens* Torr. & A. Gray, IF, pine forests, pine-mixed hardwood forests, lakes/ponds/impoundments (riparian-banks), O/C; 810, *Bruza* 973, Jones (1976a), *McDaniel* 2197, 15729, 24534
- Pycnanthemum tenuifolium* Schrad., IF, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, canals/drainage ditches (riparian-banks), roadsides, O; 320, 337, *Brooks* 278, *Bruza* 598, *Bryson* 298, 683, *Clonts* 825, Jones (1976a)
- Salvia lyrata* L., BP, PR, IF, bottomland hardwood forests, prairies, prairie cedar woodlands, roadsides, C; 136, 152, 187, *Askew* 70, Jones (1976a), Leidolf and McDaniel (1998), Morris et al. (1993)
- Scutellaria elliptica* Muhl. ex Spreng., IF, mesophytic upland hardwood forests, O; 457
- Scutellaria incana* Biehler, IF, pine forests, O; 594
- Scutellaria integrifolia* L., IF, bottomland hardwood forests, roadsides, O; 325, *Bryson* 718, Jones (1976a), *McDaniel* 1092, Theriot et al. (1993)
- Scutellaria parvula* Michx., BP, prairies, roadsides, O; 181, 212, Jones (1976a), Leidolf and McDaniel (1998), Morris et al. (1993)
- Teucrium canadense* L., BP, IF, canals/drainage ditches (riparian-banks), O; 467, *Bryson* 724
- Trichostema brachiatum* L., BP, IF, prairies, grass/forb meadows, O/C; 791, Jones (1976a), Leidolf and McDaniel (1998), *MacDonald* 7290, *McDaniel* 15506
- Trichostema dichotomum* L., BP, IF, xeric upland hardwood forests, chalk outcrops, roadsides, R/O; 920, *Brooks* 486, *McDaniel* 31311, 31622

LAURACEAE

- Lindera benzoin* (L.) Blume, IF, bottomland hardwood forests, R/O; *Leidolf s.n.*, Theriot et al. (1993)

Sassafras albidum (Nutt.) Nees, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, prairie cedar woodlands, roadsides, C; 140, 376, *Askew* 50, 63, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

LENTIBULARIACEAE

Utricularia gibba L., IF, lakes/ponds/impoundments (littoral-submergent), A(I); 696a

LINACEAE

Linum medium (Planch.) Britton, BP, IF, prairies, roadsides, C; 285, 328

Linum striatum Walter, IF, mesophytic upland hardwood forests, O; 556

Linum sulcatum Riddell, BP, prairies, R, **S3S4**; *MacDonald* s.n.

LOGANIACEAE

Gelsemium sempervirens (L.) W.T. Aiton, IF, pine-mixed hardwood forests, C(I); 1594

Spigelia marilandica L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, O; 249, 1499, Morris et al. (1993)

LYTHRACEAE

Ammannia coccinea Rottb., BP, IF, rivers/creeks (emergent), cultivated fields, A(I); 691, *Bryson* 2607, Jones (1975b), *McDaniel* 25288

**Cuphea carthagenensis* (Jacq.) J.F. Macbr., IF, mesophytic upland hardwood forests, O; 660

Lythrum alatum Pursh var. *lanceolatum* (Elliott) Torr. & A. Gray ex Rothr., BP, prairies, rivers/creeks (riparian-mudflats), A(I); 373, Jones (1975b), Leidolf and McDaniel (1998), *McDaniel* 25290, 31628

Rotala ramosior (L.) Koehne, IF, canals/drainage ditches (riparian-mudflats), C; 537, Jones (1975b)

MAGNOLIACEAE

Liriodendron tulipifera L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, O/C; 974, *Morris* 3101, Theriot et al. (1993)

MALVACEAE

**Abutilon theophrasti* Medik., BP, cultivated fields; *Bryson* 3419

Anoda cristata (L.) Schltldl., BP, roadsides, R; 798

Hibiscus laevis All., IF, rivers/creeks (riparian-banks), grass/forb meadows, O; 712, 716

Hibiscus moscheutos L., BP, roadsides, U; 938

Modiola caroliniana (L.) G. Don, PR, urban areas, U; 1204

Sida rhombifolia L., BP, cultivated fields, A; *McDaniel* 28085

Sida spinosa L., BP, cultivated fields, roadsides, O/A; 409, 800, *Bryson* 3422, Lowe (1921), *McDaniel* 28084

MELASTOMATACEAE

Rhexia mariana L. var. *mariana*, IF, xeric upland hardwood forests, pine forests, canals/drainage ditches (riparian-banks), roadsides, O/C; 440, *Bryson* 714, *Clonts* 817

MELIACEAE

**Melia azedarach* L., PR, roadsides, U; 224

MENISPERMACEAE

Calyocarpum lyonii (Pursh) A. Gray, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; Lowe (1921), *McDaniel* 24964, Morris et al. (1993), Theriot et al. (1993)

Cocculus carolinus (L.) DC., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, prairie cedar woodlands, urban areas, U; 883, *Brooks* 582, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Menispermum canadense L., PR, mesophytic upland hardwood forests, O/R, **S3S4**; *Morris* 3088, Morris et al. (1993)

MOLLUGINACEAE

Mollugo verticillata L., IF, canals/drainage ditches (emergent), O; 507, Jones (1976b)

MORACEAE

**Broussonetia papyrifera* (L.) L'Hér. ex Vent.; Pullen et al. (1968b)

Maclura pomifera (Raf.) C.K. Schneid., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, C; 202, 377, *Brooks* 467, *Bryson* 7439, Leidolf and McDaniel (1998), *McDaniel* 11622, Morris et al. (1993)

Morus rubra L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, C; 156, *Askew*

58, Bryson 7438, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

MYRICACEAE

Myrica cerifera L., IF, pine forests, O; 121

NELUMBONACEAE

Nelumbo lutea Willd., IF, lakes/ponds/impoundments (littoral-rooted-floating), O; 855

NYCTAGINACEAE

Boerhavia erecta L.; Pullen et al. (1968b)

Mirabilis albida (Walter) Heimerl, BP, chalk outcrops, R; McDaniel 13454

NYMPHAEACEAE

Nymphaea odorata Aiton, lakes/ponds/impoundments (littoral-rooted-floating); Jones (1975b)

OLEACEAE

Fraxinus americana L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O; Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Fraxinus pennsylvanica Marshall, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, lakes/ponds/impoundments (riparian-banks), roadsides, O/C; 612, 1490, McDaniel 31639, Morris et al. (1993), Theriot et al. (1993)

Fraxinus quadrangulata Michx., BP, PR, mesophytic upland hardwood forests, R, **S2**; Bryson 10123, Gordon 2031, Lowe (1921), Morris 3083, Morris et al. (1993), Smith 1414

**Ligustrum sinense* Lour., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, prairies, prairie cedar woodlands, C; 205, 854, Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

ONAGRACEAE

Gaura biennis L., BP, IF, canals/drainage ditches (riparian-banks), O; 679, McDaniel 1565

Gaura longiflora Spach; Jones (1974b)

Gaura parviflora Douglas ex Lehm.; Jones (1974b), Pullen et al. (1968b)

Ludwigia alternifolia L., IF, pine forests, grass/forb meadows, O; 502, 587, Brooks 328, Clonts 843

Ludwigia decurrens Walter, IF, bottomland hardwood forests, canals/drainage ditches (emergent), O; 693, Theriot et al. (1993)

Ludwigia glandulosa Walter, IF, bottomland hardwood forests, pine-mixed hardwood forests, canals/drainage ditches (emergent), O; 553, McDaniel 22135, Theriot et al. (1993)

Ludwigia hirtella Raf., IF, pine-mixed hardwood forests, canals/drainage ditches (emergent), grass/forb meadows, O/C; 479, Brooks 327, Clonts 842, McDaniel 2537

Ludwigia palustris (L.) Elliott, IF, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral-emergent), O; 452, 610

Ludwigia peploides (Kunth) Raven, BP, rivers/creeks (emergent), canals/drainage ditches (emergent), O/A; 407, McDaniel 25287

Oenothera biennis L., BP, IF, pine-mixed hardwood forests, roadsides, C; 850, Brooks 484, Jones (1974b)

Oenothera fruticosa L. ssp. *glauca* (Michx.) Straley, IF, pine-mixed hardwood forests, seepage areas, O; 495, McDaniel 2532

Oenothera laciniata Hill, BP, cultivated fields, A(I); 895, Bryson 3495, Jones (1974b)

Oenothera linifolia Nutt., IF, roadsides, U; Copeland s.n.

Oenothera pilosella Raf., IF, roadsides, U; Copeland s.n., Jones (1974b)

Oenothera speciosa Nutt., BP, prairies, roadsides, C; 188, Leidolf and McDaniel (1998)

Oenothera triloba Nutt., BP, **SU**; Donald s.n. (MISSA)

OXALIDACEAE

Oxalis articulata Savigny ssp. *rubra* (St. -Hil.) Lourteig; Pullen et al. (1968b)

Oxalis dillenii Jacq., IF, bottomland hardwood forests, O; 263, 635

Oxalis stricta L., BP, PR, IF, bottomland hardwood forests, rivers/creeks (riparian-banks), urban areas, O; 626, McDaniel 13440, Theriot et al. (1993)

Oxalis violacea L., PR, IF, mesophytic upland hardwood forests, xeric upland hardwood forests, O; 1314, Morris et al. (1993)

PAPAVERACEAE

Sanguinaria canadensis L., PR, mesophytic upland hardwood forests, A(I); Morris 3089, Morris et al. (1993)

PASSIFLORACEAE

Passiflora incarnata L., BP, IF, bottomland hardwood forests, lakes/ponds/impoundments

(riparian–banks), grass/forb meadows, roadsides, O/C; 329, 1587, Bryson 709, Clonts 833, Jones (1976b), McDaniel 31323

Passiflora lutea L., PR, IF, bottomland hardwood forests, xeric upland hardwood forests, O; Clonts 822, Jones (1976b), Ray 4734 (MISSA), Theriot et al. (1993)

PENTHORACEAE

Penthorum sedoides L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (emergent), canals/drainage ditches (emergent), A(I); 478, 692, 1584, Theriot et al. (1993)

PHRYMACEAE

Phryma leptostachya L., PR, mesophytic upland hardwood forests, O; 461, Morris et al. (1993), Smith 1416

PHYTOLACCACEAE

Phytolacca americana L., IF, roadsides, C; 522

PLANTAGINACEAE

Plantago aristata Michx., IF, roadsides, C; 327, 348

**Plantago lanceolata* L., BP, roadsides, C; 213, 400

Plantago rugelii Decne., PR, IF, roadsides, urban areas, O; 344, Pullen et al. (1968b), Stewart 106

Plantago virginica L., BP, prairies, urban areas, C/A(I); 183, McDaniel 31037

PLATANACEAE

Platanus occidentalis L., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)

POLEMONIACEAE

Phlox carolina L. ssp. *angusta* Wherry, IF, pine-mixed hardwood forests, seepage areas, O/C; 497, Brooks 119, McDaniel 15073, Pullen et al. (1968b)

Phlox divaricata L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 127, Morris et al. (1993)

Phlox paniculata L., IF, C(I); Lowe (1921), MacDonald 9721

Phlox pilosa L., IF, pine forests, roadsides, O/A; 238, Brooks 118, McDaniel 1093, 3145

POLYGALACEAE

Polygala incarnata L., IF, pine forests, R; 1565, Bryson 713

Polygala mariana Mill., IF, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, canals/drainage ditches

(riparian–banks), lakes/ponds/impoundments (riparian–mudflats), O/C; 447, Bennett s.n., Brooks 325, Bryson 731, Daugherty 2, McDaniel 2529, 2641, 13487

Polygala nana (Michx.) DC., IF, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, seepage areas, O/C; 243, 1483, 1495, 1564, Bryson 702, 708, McDaniel 2535

Polygala sanguinea L., IF, bottomland hardwood forests, pine forests, grass/forb meadows, roadsides, O; 323, 582, Bryson 680, Clonts 829, 845

POLYGONACEAE

Brunnichia ovata (Walter) Shinnars, BP, IF, bottomland hardwood forests, lakes/ponds/impoundments (riparian–banks), O/A(I); 599, Jones (1975b), McDaniel 31616, Theriot et al. (1993)

**Polygonum aviculare* L., BP, IF, lakes/ponds/impoundments (riparian–mudflats), cultivated fields, A(I); 404, 608, Jones (1975b)

**Polygonum cespitosum* Blume, IF, lakes/ponds/impoundments (riparian–mudflats), O; 979

Polygonum densiflorum Meisn., IF, swamp forests, A; McDaniel 24537, Stewart 124

Polygonum hirsutum Walter, PR, canals/drainage ditches (emergent), R; Leidolf pers. obs.

Polygonum hydropiperoides Michx., IF, bottomland hardwood forests, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral–emergent), C/A; 450, 856, Bruza 962, 981, Jones (1975b), Theriot et al. (1993)

Polygonum lapathifolium L., BP, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral–emergent), C; 893, Jones (1975b), McDaniel 31330, 31641

Polygonum pensylvanicum L., BP, IF, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral–emergent), roadsides, U/C; 410, 597, 882, Jones (1975b)

Polygonum punctatum Elliott; Jones (1975b)

Polygonum virginianum L., IF, bottomland hardwood forests, pine-mixed hardwood forests, O; 721, Jones (1975b), Leidolf s.n., Theriot et al. (1993)

**Rumex acetosella* L.; Jones (1975b)

Rumex altissimum Alph. Wood; Jones (1975b)

**Rumex crispus* L., BP, IF, cultivated fields, roadsides, C; 231, Bryson 3496, Jones (1975b)

Rumex hastatulus Baldwin, BP, IF, roadsides, urban areas, C(l)/A(l); 468, 1312, Barbour 6685, Jones (1975b), Pullen et al. (1968b)

**Rumex pulcher* L.; Jones (1975b), Pullen et al. (1968b)

PORTULACACEAE

Claytonia virginica L., PR, IF, bottomland hardwood forests, grass/forb meadows, roadsides, O/C; 34, Lowe (1921), McDaniel 1680, Morris et al. (1993)

PRIMULACEAE

Anagallis minima (L.) Krause, BP, xeric upland hardwood forests; McDaniel 29336a

Dodecatheon meadia L., BP, PR, prairies, prairie cedar woodlands, R, **S2**; Bryson 5400, Lowe (1921), Morris 3095, Morris et al. (1993)

Lysimachia ciliata L., IF, seepage areas, U; Bryson 712

Lysimachia lanceolata Walter; Jones (1976b)

**Lysimachia nummularia* L., BP, canals/drainage ditches (riparian–banks, emergent), R; 408

Samolus valerandi L. ssp. *parviflorus* (Raf.) Hultén, BP, IF, rivers/creeks (riparian–mudflats), canals/drainage ditches (emergent), O; 448, 1487 (R448), Bryson 3076, Jones (1976b)

RANUNCULACEAE

Actaea pachypoda Elliott, BP, PR; Gordon 2062 (MMNS)

Anemone caroliniana Walter, BP, prairies, chalk outcrops, roadsides, O/C; 115, 143, 1267 (R115), Leidolf and McDaniel (1998), Morris 3077, Morris et al. (1993)

Anemone virginiana L., PR, bottomland hardwood forests, mesophytic upland hardwood forests, O; Lowe (1921), Morris et al. (1993)

Clematis crispa L., PR, IF, bottomland hardwood forests, canals/drainage ditches (riparian–banks), roadsides, O; 534, Morris et al. (1993)

**Clematis terniflora* DC., BP, PR, prairie cedar woodlands, roadsides, O; 707, McDaniel 31617

Delphinium carolinianum Walter ssp. *carolinianum*, BP, prairies, O/A(l); 273, 1509 (R273), Brooks 154, MacDonald 8716, McDaniel 31039

Delphinium tricornis Michx., BP, prairies, C(l), **S2**; McDaniel 31027

Myosurus minimus L., BP, cultivated fields, C(l); 1271, 1284, Bryson 3500

Ranunculus abortivus L., BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, lakes/ponds/impoundments (riparian–mudflats), urban areas, C; 1278, 1292, 1335, McDaniel 1589

**Ranunculus arvensis* L., BP, cultivated fields, A(l); 1273, 1343a

Ranunculus fascicularis Muhl. ex Bigelow, BP, PR, mesophytic upland hardwood forests, prairies, O; 5, 67, 117(R5), Leidolf and McDaniel (1998), McDaniel 2326

Ranunculus hispidus Michx. var. *hispidus*, BP, cultivated fields, A; McDaniel 1826

Ranunculus hispidus Michx. var. *nitidus* (Chapm.) T. Duncan, BP, urban areas, A; McDaniel 24967

Ranunculus micranthus Nutt., BP, xeric upland hardwood forests, O; 1360

**Ranunculus muricatus* L., BP, PR, IF, bottomland hardwood forests, cultivated fields, urban areas, C/A(l); 1275, 1282, Bryson 3497, Clonts 744, McDaniel 1689

**Ranunculus parviflorus* L., BP, cultivated fields; Bryson 3494

Ranunculus pusillus Poir., BP, IF, canals/drainage ditches (riparian–banks), grass/forb meadows, O; 1345, 1363

Ranunculus recurvatus Poir., BP, PR, mesophytic upland hardwood forests, R/U; 1349, McDaniel 31023

**Ranunculus sardous* Crantz, BP, PR, roadsides, C/A; 68, 77, McDaniel 31058

Thalictrum debile Buckley, BP, mesophytic upland hardwood forests, A, **S1S2**; McDaniel 31385

Thalictrum thalictroides (L.) Eames & B. Boivin, PR, IF, mesophytic upland hardwood forests, O; 89, Askew 42, Morris et al. (1993)

RHAMNACEAE

Berchemia scandens (Hill) K. Koch, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairies, prairie cedar woodlands, chalk outcrops, O/C; 227, Bryson 7441, Carter 3002, Leidolf and McDaniel (1998), McDaniel 10581, Morris et al. (1993), Theriot et al. (1993)

Ceanothus americanus L., BP, prairie cedar woodlands, chalk outcrops, O/A(l); 286, 432, Leidolf and McDaniel (1998), McDaniel 13452, 31065, Morris et al. (1993)

Rhamnus caroliniana Walter [= *Frangula caroliniana* (Walter) A. Gray], BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, chalk outcrops, O/C; 388, 1518, Leidolf and McDaniel (1998), *MacDonald* 8717, *McDaniel* 31611, Morris et al. (1993)

Rhamnus lanceolata Pursh, BP, PR, prairie cedar woodlands, chalk outcrops, C(l), **S2**; 831, 1326 (R831), 1340, Leidolf and McDaniel (1998), *MacDonald* 8150, Pullen et al. (1968b), *Ray* 8008 (MISSA), *Smith* 1447, 1937

ROSACEAE

Agrimonia rostellata Wallr., BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, O/A(l); 671, *McDaniel* 31611

Amelanchier arborea (F. Michx.) Fernald, IF, bottomland hardwood forests, O; *Leidolf s.n.*, Theriot et al. (1993)

**Aphanes microcarpa* (Boiss. & Reut.) Rothm., PR, roadsides, urban areas, O/C; 1213, 1506

Crataegus calpodendron (Ehrh.) Medik., PR, mesophytic upland hardwood forests, O, **S?**; 216, *Morris* 3087, Morris et al. (1993)

Crataegus crus-galli L., BP, IF, pine-mixed hardwood forests, prairie cedar woodlands, roadsides, O; 279, 697, Leidolf and McDaniel (1998)

Crataegus engelmannii Sarg., BP, xeric upland hardwood forests, prairie cedar woodlands, O; 206, Leidolf and McDaniel (1998), *McDaniel* 11619

Crataegus marshallii Eggl., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine-mixed hardwood forests, O; 135, 1370, *Leidolf s.n.*, *McDaniel* 1687, *Morris* et al. (1993), Theriot et al. (1993)

Crataegus pruinosa (H.L. Wendl.) K. Koch, IF, bottomland hardwood forests, O; *Leidolf s.n.*, Theriot et al. (1993)

Crataegus spathulata Michx., BP, IF, bottomland hardwood forests, xeric upland hardwood forests, R/O; *Leidolf s.n.*, *McDaniel* 3493, *Morris* 3102, Morris et al. (1993), Theriot et al. (1993)

Crataegus viridis L., IF, bottomland hardwood forests, R/O; *Leidolf s.n.*, Theriot et al. (1993)

**Duchesnea indica* (Andrz.) Focke, PR, mesophytic upland hardwood forests, O; 1306

Fragaria virginiana Duchesne, BP, xeric upland hardwood forests, prairie cedar woodlands,

O/C; 168, 214, 1328, *Askew* 27, *Morris* 3078, *Morris* et al. (1993)

Geum canadense Jacq., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), C; 304, *Bryson* 3079, *Morris* et al. (1993)

Potentilla simplex Michx., BP, prairies, O; 169, 1365

Prunus americana Marshall, BP, IF, rivers/creeks (riparian-banks), roadsides, U; 103, 141, 437

Prunus angustifolia Marshall, BP, PR, IF, prairies, chalk outcrops, roadsides, C; 30, 31, 32, 277

Prunus mexicana S. Watson, BP, IF, bottomland hardwood forests, pine-mixed hardwood forests, O; 43, *Morris* et al. (1993), Pullen et al. (1968b), Theriot et al. (1993)

Prunus serotina Ehrh., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, rivers/creeks (riparian-banks), C; 73, *Askew* 49, *Morris* et al. (1993), Theriot et al. (1993)

**Pyracantha coccinea* M. Roem., BP, prairies, chalk outcrops, R/C(l); 207, 621, Leidolf and McDaniel (1998), *MacDonald* 7531, 8150b, *McDaniel* 15513, 29756

**Pyrus calleryana* Decne., BP, IF, pine forests, prairie cedar woodlands, U; 805, 828, Leidolf and McDaniel (1998)

Rosa carolina L., BP, prairies, prairie cedar woodlands, O; 842, 1453, *Brooks* 146, Leidolf and McDaniel (1998)

**Rosa chinensis* Jacq., BP, IF, mesophytic upland hardwood forests, roadsides, R/U; 208, 1488

**Rosa multiflora* Thunb. ex Murray, BP, PR, bottomland hardwood forests, prairies, prairie cedar woodlands, roadsides, C; 8, 177, Leidolf and McDaniel (1998), *Morris* et al. (1993)

Rubus argutus Link, BP, PR, IF, bottomland hardwood forests, prairies, O; Leidolf and McDaniel (1998), *Morris* et al. (1993), Theriot et al. (1993)

Rubus betulifolius Small [= *R. argutus* Link], PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, roadsides, C; 154, 1373

Rubus cuneifolius Pursh, BP, prairies, prairie cedar woodlands, O; *McDaniel* 31139

Rubus flagellaris Willd., IF, pine-mixed hardwood forests, O; 122

Rubus trivialis Michx., BP, IF, bottomland hard-

wood forests, C; *McDaniel* 2324, Theriot et al. (1993)

RUBIACEAE

Cephalanthus occidentalis L., IF, bottomland hardwood forests, canals/drainage ditches (riparian-banks), lakes/ponds/impoundments (riparian-banks), C; 584, 607, Jones (1976b), Theriot et al. (1993)

**Cruciata pedemontana* (Bellardi) Ehrend., BP, roadsides, C(l); *MacDonald* 9305

Diodia teres Walter, IF, roadsides, O; 439, Jones (1976b)

Diodia virginiana L., BP, IF, bottomland hardwood forests, lakes/ponds/impoundments (riparian-mudflats), cultivated fields, roadsides, C; 416, 611, Theriot et al. (1993)

Galium aparine L., BP, PR, lakes/ponds/impoundments (riparian-banks), roadsides, C; 155, Jones (1976b), *McDaniel* 31049

Galium circaezans Michx., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, C; 303, Jones (1976b), Leidolf and *McDaniel* (1998), Morris et al. (1993)

Galium obtusum Bigelow, IF, bottomland hardwood forests, A(l); 245, Jones (1976b)

**Galium parisiense* L., BP, roadsides, A(l); 314

Galium pilosum Aiton, BP, IF, xeric upland hardwood forests, grass/forb meadows, U; 1590, *Clonts* 826, Jones (1976b)

Galium tinctorium (L.) Scop.; Jones (1976b)

Galium uniflorum Michx., IF, mesophytic upland hardwood forests, O; 446

Galium virgatum Nutt., BP, prairies, O; 146, Leidolf and *McDaniel* (1998)

Hedyotis australis W.H. Lewis & D.M. Moore [= *Houstonia micrantha* (Shinners) Terrell], IF, urban areas, U/C(l); 1316, *MacDonald* 8236

Hedyotis crassifolia Raf. [= *Houstonia pusilla* Schoepf], BP, PR, IF, prairies, grass/forb meadows, urban areas, C; 42, 62, 132, Jones (1976b), Leidolf and *McDaniel* (1998)

Hedyotis nigricans (Lam.) Fosberg, BP, prairies, chalk outcrops, O; 294, Jones (1976b), Leidolf and *McDaniel* (1998), *McDaniel* 15512

Hedyotis purpurea (L.) Torr. & A. Gray var. *calycosa* (A. Gray) Fosberg, BP, IF, bottomland hardwood forests, prairies, prairie cedar woodlands, grass/forb meadows, roadsides, C; 165,

185, 257, 1341 (R185), 1371, *Brooks* 125, *Bryson* 57, 715, Jones (1976b), Leidolf and *McDaniel* (1998), *McDaniel* 10523, Morris et al. (1993), Theriot et al. (1993)

Mitchella repens L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, C; 251, 1580, *Brooks* 474, Jones (1976b), Theriot et al. (1993)

Oldenlandia boscii (DC.) Chapm., IF, pine forests, pine-mixed hardwood forests, canals/drainage ditches (riparian-banks), C/A; 505, *Brooks* 322, *Copeland s.n.*, *McDaniel* 2661

Oldenlandia uniflora L., IF, pine-mixed hardwood forests; *Brooks* 324

Richardia scabra L.; Jones (1976b)

**Sherardia arvensis* L., PR, roadsides, urban areas, C/A; 102, Jones (1976b), *McDaniel* 1610, Pullen et al. (1968b)

Spermacoce glabra Michx., BP, canals/drainage ditches (riparian-banks), roadsides, O; 631

RUTACEAE

**Poncirus trifoliata* (L.) Raf., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, roadsides, U; 69, 870, Theriot et al. (1993)

Ptelea trifoliata L., IF, bottomland hardwood forests, rivers/creeks (riparian-banks), U, **S354**; 260, 717

Zanthoxylum clava-herculis L., BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, U; 935, *McDaniel* 1988, 24448, 31042, Morris et al. (1993)

SALICACEAE

**Populus alba* L., IF, roadsides, urban areas, U; 1542, 1545

Populus deltoides W. Bartram ex Marshall, PR, bottomland hardwood forests, mesophytic upland hardwood forests, C; 1322, Morris et al. (1993)

Salix exigua Nutt., BP, canals/drainage ditches (riparian-banks), R; 613, Lowe (1921)

Salix humilis Marshall, IF, pine forests, pine-mixed hardwood forests, lakes/ponds/impoundments (riparian-banks), seepage areas, roadsides, U; 508, 1501 (R508), *Edwards s.n.*, *MacDonald* 6132, *McDaniel* 2840

Salix nigra Marshall, BP, IF, bottomland hardwood forests, rivers/creeks (riparian-banks/mudflats), canals/drainage ditches (riparian-

banks), C; 131, 1362, Askew 129, Theriot et al. (1993)

SAPINDACEAE

Cardiospermum halicacabum L., IF, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), cultivated fields, O; 694, 710, Pullen et al. (1968b), Smith 942

SAPOTACEAE

Bumelia lycioides (L.) Pers. [= *Sideroxylon lycioides* L.], BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, rivers/creeks (riparian-banks), C; 434, 688, 827, Leidolf and McDaniel (1998), Morris et al. (1993)

SAURURACEAE

Saururus cernuus L., PR, IF, bottomland hardwood forests, swamp forests, O; 341, Jones (1975b), McDaniel 28882, Theriot et al. (1993)

SCROPHULARIACEAE

Agalinis fasciculata (Elliott) Raf., IF, pine forests, O; 880

Agalinis gattingeri (Small) Small ex Britton, BP, prairies, O; 929, Leidolf and McDaniel (1998)

Agalinis heterophylla (Nutt.) Small ex Britton, BP, R; McDaniel 31653

Agalinis pseudaphylla (Pennell) Shinnery, BP, prairies, R, **S2**; 829, Leidolf and McDaniel (1998), McDaniel 15617

Agalinis purpurea (L.) Pennell, BP, IF, pine forests, prairies, roadsides, C(I); 871, 931, 960, Leidolf and McDaniel (1998), McDaniel 24535, 31308, Stewart 117

Agalinis tenuifolia (Vahl) Raf., BP, IF, pine-mixed hardwood forests, chalk outcrops, roadsides, O; 989, McDaniel 14664, 31312

Aureolaria flava (L.) Farw., BP, IF, xeric upland hardwood forests, pine-mixed hardwood forests, roadsides, U/A(I); 718, Clonts 1400, McDaniel 31623

Aureolaria pectinata (Nutt.) Pennell, IF, pine-mixed hardwood forests, U/A(I); 1538, McDaniel 2724

Buchnera floridana Gandoger. [= *B. americana* L.], BP, IF, prairies, seepage areas, O/R; 296, 371 (R296), 539, Leidolf and McDaniel (1998), McDaniel 13450, 31086

Dasistoma macrophylla (Nutt.) Raf., BP, PR, bottomland hardwood forests, mesophytic up-

land hardwood forests, roadsides, O, **S3S4**; 433, 1601, Morris et al. (1993)

Epifagus virginiana (L.) Barton, IF, bottomland hardwood forests, A(I); 943

Gratiola neglecta Torr., IF, bottomland hardwood forests, canals/drainage ditches (emergent), grass/forb meadows, C; 264, 1347, McDaniel 1679

Gratiola pilosa Michx., IF, seepage areas, O; 481

Gratiola virginiana L., IF, bottomland hardwood forests, swamp forests, canals/drainage ditches (emergent), O/A(I); 1294, 1440, McDaniel 2451

Leucospora multifida (Michx.) Nutt., BP, cultivated fields, O; 422

Linaria canadensis (L.) Chaz. [= *Nuttallanthus canadensis* (L.) D.A. Sutton], BP, cultivated fields, A(I); 1281

Lindernia dubia (L.) Pennell, BP, IF, bottomland hardwood forests, rivers/creeks (riparian-mudflats), O; McDaniel 25289, Theriot et al. (1993)

Mecardonia acuminata (Walter) Small, IF, pine forests, seepage areas, lakes/ponds/impoundments (riparian-banks), O; 646, 652, Copeland s.n.

Micranthemum umbrosum (J.F. Gmel.) S.F. Blake, IF, lakes/ponds/impoundments (riparian-mudflats), O/C; 1595, McDaniel 1570, 1570a

Mimulus alatus Aiton, BP, IF, bottomland hardwood forests, rivers/creeks (riparian-banks/mudflats), canals/drainage ditches (riparian-banks), O; 554, 672, Theriot et al. (1993)

**Parentucellia viscosa* (L.) Caruel, PR, urban areas, C(I); MacDonald 9377

Pedicularis canadensis L., PR, mesophytic upland hardwood forests, O; Smith 1930

Penstemon digitalis Nutt. ex Sims, BP, PR, mesophytic upland hardwood forests, prairies, prairie cedar woodlands, rivers/creeks (riparian-banks), O; 217, 1452, Morris 3098

Penstemon laevigatus Aiton, BP, prairies, roadsides, O; 211, 1466

Penstemon tenuiflorus Pennell, BP, prairies, prairie cedar woodlands, chalk outcrops, roadsides, U/C(I), **S2S3**; 270, Bryson 129, 7442, McDaniel 10584, 31020, Morris 3079, Morris et al. (1993), Stewart 357

Penstemon tubiflorus Nutt., BP, PR, mesophytic upland hardwood forests, lakes/ponds/im-

poundments (riparian–banks), R/U; *McDaniel* 31051, Morris et al. (1993)

Scrophularia marilandica L., PR, mesophytic upland hardwood forests, U/O; *McDaniel* 28889, Morris et al. (1993)

Seymeria cassioides (J.F. Gmel.) S.F. Blake, IF, pine forests, pine-mixed hardwood forests, C/A(I); 959, *McDaniel* 22134, 24536

Tomanthera auriculata (Michx.) Raf. [= *Agalinis auriculata* (Michx.) S.F. Blake], BP, prairies, roadsides, RR, **S1**; 928, 930, Leidolf and *McDaniel* (1998), *McDaniel* 15621

**Verbascum blattaria* L., BP, prairies, roadsides, O; 318, *Brooks* 156

**Verbascum thapsus* L., IF, roadsides, C(I); 521

**Veronica arvensis* L., BP, roadsides, C; 70, 159

Veronica peregrina L., BP, PR, cultivated fields, urban areas, C; 1208, 1274, 1285

**Veronica persica* Poir., PR, urban areas, O; 1207

SIMAROUBACEAE

**Ailanthus altissima* (Mill.) Swingle, PR, urban areas, R; *Smith* 363

SOLANACEAE

**Datura stramonium* L., BP, urban areas; *Carraway* 490

Physalis angulata L., BP, IF, chalk outcrops, cultivated fields, grass/forb meadows, O; 417, 520, 713, *Clonts* 1408, *McDaniel* 22195

Physalis heterophylla Nees, BP, PR, mesophytic upland hardwood forests, lakes/ponds/impoundments (riparian–mudflats), O; *McDaniel* 31047, Morris et al. (1993)

Physalis pubescens L.; Pullen et al. (1968b)

Physalis virginiana Mill., BP, IF, pine forests, rivers/creeks (riparian–mudflats), canals/drainage ditches (riparian–banks), O; 685, 835, *McDaniel* 21234

Solanum carolinense L., IF, roadsides, O; 252, *Clonts* 821

Solanum ptychanthum Dunal, PR, mesophytic upland hardwood forests, U; 890

STAPHYLEACEAE

Staphylea trifolia L., IF, bottomland hardwood forests, A(I), **S3**; 280, 352 (R280), 978 (R280), 1368 (R280), *Blocker s.n.* (MISSA), *Channell s.n.* (MISSA), Theriot et al. (1993)

STYRACACEAE

Styrax americanus Lam., IF, bottomland hard-

wood forests, lakes/ponds/impoundments (riparian–banks), U/C; 949, *Leidolf s.n.*, *McDaniel* 1820a, Theriot et al. (1993)

SYMPLOCACEAE

Symplocos tinctoria (L.) L'Hér., IF, bottomland hardwood forests, C; 903, 948, *Askew* 47, Theriot et al. (1993)

TILIACEAE

Tilia americana L., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, rivers/creeks (riparian–banks), O/C(I); *Bryson* 7430, *Morris* 3085, Morris et al. (1993)

ULMACEAE

Celtis laevigata Willd., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, pine-mixed hardwood forests, prairie cedar woodlands, C; 233, 936, Leidolf and *McDaniel* (1998), *Lowe* (1921), Morris et al. (1993), Theriot et al. (1993)

Planera aquatica J.F. Gmel., IF, bottomland hardwood forests, rivers/creeks (riparian–banks), R/O; *Leidolf s.n.*, Theriot et al. (1993)

Ulmus alata Michx., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, prairies, prairie cedar woodlands, chalk outcrops, lakes/ponds/impoundments (riparian–banks), roadsides, C; 39, 350, 634, 1336, Leidolf and *McDaniel* (1998), Morris et al. (1993), Theriot et al. (1993)

Ulmus americana L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, pine-mixed hardwood forests, roadsides, C; 24, 37, Morris et al. (1993), Theriot et al. (1993)

Ulmus rubra Muhl., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, rivers/creeks (riparian–banks), O; 104, Leidolf and *McDaniel* (1998), Morris et al. (1993)

Ulmus serotina Sarg., PR, mesophytic upland hardwood forests, R, **S3?**; 884, *Anderson s.n.* (MISSA), *Crawford s.n.* (MISSA), *Henry s.n.* (MISSA), *Howell s.n.* (MISSA), *Johnson s.n.* (MISSA), *McDaniel* 1046, *Smith* 1022

URTICACEAE

Boehmeria cylindrica (L.) Sw., BP, IF, bottomland

hardwood forests, rivers/creeks (riparian–mudflats), A(l); 673, Theriot et al. (1993)

Parietaria pensylvanica Muhl. ex Willd., BP, lakes/ponds/impoundments (riparian–mudflats), A(l); McDaniel 31056

Pilea pumila (L.) A. Gray, IF, bottomland hardwood forests, swamp forests, rivers/creeks (riparian–banks), O/A; 905, Smith 944

VALERIANACEAE

**Valerianella locusta* (L.) Betcke, PR, urban areas, O; McDaniel 21186

Valerianella radiata (L.) Dufr., BP, PR, IF, bottomland hardwood forests, roadsides, urban areas, C/A; 101, Askew 66, Jones (1976b), McDaniel 1666, 31036

VERBENACEAE

Callicarpa americana L., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, grass/forb meadows, C; 449, 857, Clonts 844, Morris et al. (1993), Theriot et al. (1993)

Lippia lanceolata Michx. [= *Phyla lanceolata* (Michx.) Greene], BP, chalk outcrops, cultivated fields, O; 415, McDaniel 22926

Verbena bipinnatifida Nutt. [= *Glandularia bipinnatifida* (Nutt.) Nutt. var. *bipinnatifida*], BP, IF, prairies, chalk outcrops, roadsides, R/C; 167, 275, 1329, Bruza 925, Bryson 7446, McDaniel 13449, 31019, Morris 3082, Morris et al. (1993), Pullen et al. (1968b)

**Verbena bonariensis* L., IF, grass/forb meadows, U/C(l); 1655, Bruza 963

**Verbena brasiliensis* Vell., BP, PR, IF, grass/forb meadows, roadsides, urban areas, C/A(l); 290, 463, 1572, Bryson 730, Scruggs 100

Verbena canadensis (L.) Britton [= *Glandularia canadensis* (L.) Nutt.], BP; Morris et al. (1993)

**Verbena rigida* Spreng., PR, IF, grass/forb meadows, roadsides, U; 847, 1532

Verbena simplex Lehm., BP, IF, prairies, chalk outcrops, roadsides, O; 267, 298, Clonts 815, Leidolf and McDaniel (1998), Lowe (1921), McDaniel 13448, 31040, Morris 3080, Morris et al. (1993), Sundell 1538

Verbena urticifolia L., BP, canals/drainage ditches (riparian–banks), roadsides, U; 833, Lowe (1921)

VIOLACEAE

Hybanthus concolor (T.F. Forst.) Spreng., PR, mesophytic upland hardwood forests, C(l), **S2**;

Channell s.n. (MISSA), *Mckee s.n.* (MISSA), *Ray 8214* (MISSA), *Smith 1929*

Viola affinis Leconte, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine forests, canals/drainage ditches (riparian–banks), C; 41, 86, 98, McDaniel 2884, Morris et al. (1993), Theriot et al. (1993)

Viola bicolor Pursh, PR, roadsides, C; 60

Viola palmata L., PR, IF, mesophytic upland hardwood forests, O; 97, 123, 153(R123)

Viola primulifolia L., IF, mesophytic upland hardwood forests, R/O; 198, Bryson 963

Viola sagittata Aiton, BP, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, chalk outcrops, rivers/creeks (riparian–banks), C; 87, 106, 118, Bryson 5392, McDaniel 1590, 1608

VISCACEAE

Phoradendron leucarpum (Raf.) Reveal & M.C. Johnst., PR, urban areas, C; 1203

VITACEAE

Ampelopsis arborea (L.) Koehne, BP, IF, bottomland hardwood forests, xeric upland hardwood forests, prairie cedar woodlands, C; 469, Leidolf and McDaniel (1998), McDaniel 31634, 31655, Theriot et al. (1993)

Ampelopsis cordata Michx., BP, PR, IF, bottomland hardwood forests, roadsides, urban areas, C; 614, 1491, 1533

Cissus incisa Des Moul., PR, urban areas; McDaniel 9786

Parthenocissus quinquefolia (L.) Planch., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O; Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Vitis aestivalis Michx., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, chalk outcrops, O; Leidolf and McDaniel (1998), Morris et al. (1993), Theriot et al. (1993)

Vitis cinerea (Engelm.) Millard, BP, IF, bottomland hardwood forests, pine-mixed hardwood forests, urban areas, R/O; 1446, 1496, 1599, Theriot et al. (1993)

Vitis rotundifolia Michx., PR, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, C; 1593, Morris et al. (1993), Theriot et al. (1993)

LILIOPSIDA

AGAVACEAE

Manfreda virginica (L.) Salisb. ex Rose, BP, IF, prairies, roadsides, C; 425, 627, 802, 839, Bruza 967, Leidolf and McDaniel (1998), Locke s.n. (MISSA), Ray 49 (MISSA)

ALISMATACEAE

Alisma subcordatum Raf., IF, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral–emergent), RR, **SH**; Frasier s.n., Leidolf pers. obs., MacDonald 10884

Echinodorus cordifolius (L.) Griseb., IF, lakes/ponds/impoundments (riparian–mudflats, littoral–emergent), O; 726, Easley s.n. (MISSA), Jones (1974a)

Sagittaria calycina Engelm.; Hare s.n. (MISSA)

Sagittaria lancifolia L.; Blocker s.n. (MISSA), Jones (1974a)

Sagittaria platyphylla (Engelm.) J.G.Sm., IF, lakes/ponds/impoundments (riparian–mudflats, littoral–emergent), O; 727

ALLIACEAE

**Allium ampeloprasum* L., BP, grass/forb meadows, roadsides, O; 311

Allium canadense L., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairies, lakes/ponds/impoundments (riparian–mudflats), grass/forb meadows, urban areas, O/A; 276, Fisher 82 (MISSA), Leidolf and McDaniel (1998), McDaniel 31054, Morris et al. (1993)

Allium mobilense Regel [= *A. canadense* L. var. *mobilense* (Regel) Ownbey], PR, urban areas; Prescott s.n. (MISSA)

**Allium vineale* L., BP, prairies, roadsides, O; 310, Leidolf and McDaniel (1998)

Nothoscordum bivalve (L.) Britton, BP, PR, mesophytic upland hardwood forests, prairies, prairie cedar woodlands, C; 61, 113, Leidolf and McDaniel (1998), Mitchell s.n. (MISSA), Murphy s.n. (MISSA), Persons s.n. (MISSA), Rainwater s.n. (MISSA), Sistrunk s.n. (MISSA), Stauffer s.n. (MISSA), Tringle s.n. (MISSA)

AMARYLLIDACEAE

**Leucojum aestivum* L., IF, bottomland hardwood forests, R; Askew 46

**Lycoris radiata* (L'Hér.) Herb., PR, roadsides, urban areas, O; 996

**Narcissus biflorus* Curtis [= *N. × medioluteus* Mill. (pro sp.)], PR, roadsides, urban areas, O; 33

**Narcissus × incomparabilis* Mill., BP, roadsides, urban areas, O; 79

**Narcissus jonquilla* L., PR, roadsides, urban areas, O; 22

ARACEAE

Arisaema dracontium (L.) Schott, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, lakes/ponds/impoundments (riparian–mudflats), A(l); 218, 258, Brown s.n. (MISSA), Jones (1974a), Lowe (1921), McDaniel 31057, Morris et al. (1993), Theriot et al. (1993)

Arisaema quinatum (Buckley) Schott [= *A. triphyllum* (L.) Schott ssp. *quinatum* (Buckley) Huttleston], PR, mesophytic upland hardwood forests, R; Morris et al. (1993), Tracy s.n. (MISSA)

Arisaema triphyllum (L.) Schott, PR, bottomland hardwood forests, mesophytic upland hardwood forests, U; 147, Channell s.n. (MISSA), Jones (1974a), Moore s.n. (MISSA)

ARECACEAE (PALMAE)

Sabal minor (Jacq.) Pers., IF, bottomland hardwood forests, pine-mixed hardwood forests, A(l); 714, Askew 61, McDaniel 2549

ASPARAGACEAE

**Asparagus officinalis* L., BP, PR, prairies, roadsides, urban areas, U; 804, Channell s.n. (MISSA), 18 (MISSA), Christian s.n. (MISSA), Clonts 490, Leidolf and McDaniel (1998)

COMMELINACEAE

**Commelina communis* L., BP, canals/drainage ditches (emergent), roadsides, C; 797, Jones (1976b)

Commelina diffusa Burm.f., PR, canals/drainage ditches (emergent), urban areas, O; 923

Commelina virginica L., BP, IF, bottomland hardwood forests, rivers/creeks (riparian–mudflats), canals/drainage ditches (emergent), C; 675, 695, 1374, Brooks 400, Jones (1976b), Moore s.n. (MISSA), Stauffer s.n. (MISSA)

Tradescantia ohiensis Raf., IF, pine forests, roadsides, C; 256, 326, Brooks 124, Easley s.n. (MISSA), Funchess s.n. (MISSA), Jones (1976b), Rainwater s.n. (MISSA), Stauffer s.n. (MISSA)

Tradescantia virginiana L., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, O/C; *Persons s.n.* (MISSA), *Presley s.n.* (MISSA), *Price 52* (MISSA), *Ray 8008* (MISSA), *Theriot et al.* (1993), *Tracy s.n.* (MISSA)

CONVALLARIACEAE

Maianthemum racemosum (L.) Link, IF, bottomland hardwood forests; *Locke s.n.* (MISSA), *Shelley s.n.* (MISSA), *Stauffer s.n.* (MISSA), *Theriot et al.* (1993)

Polygonatum biflorum (Walter) Elliott, PR, mesophytic upland hardwood forests, O; 219, 1348 (R219), *Bryson 8331*, *Channell s.n.* (MISSA), *Donald s.n.* (MISSA), *Easley s.n.* (MISSA), *Hammer s.n.* (MISSA), *Morris et al.* (1993), *Stauffer s.n.* (MISSA)

Uvularia floridana Chapm., **S1**; *Eckles s.n.* (MISSA)

Uvularia grandiflora Sm.; *Easley s.n.* (MISSA)

Uvularia sessilifolia L., IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 1297, 1367, 1486(R1297)

CYPERACEAE

Carex abscondita Mack., IF, bottomland hardwood forests; *Theriot et al.* (1993)

Carex albicans Willd. ex Spreng. var. *albicans*, PR, mesophytic upland hardwood forests, O; *Morris et al.* (1993)

Carex albicans Willd. ex Spreng. var. *australis* (L.H. Bailey) Rettig, PR, mesophytic upland hardwood forests, O; 66

Carex albolutescens Schwein., PR, IF, canals/drainage ditches (riparian-banks), roadsides, O; 176, *Bryson 3138* (*Charles T. Bryson personal herbarium [ctb]*), 3191 (ctb), 3833 (ctb)

Carex annectens (E.P. Bicknell) E.P. Bicknell, PR, IF, bottomland hardwood forests, roadsides, O; 266, *Bryson 149*, *Morris et al.* (1993)

Carex atlantica Bailey ssp. *atlantica*, IF, pine-mixed hardwood forests, seepage areas; *Bryson 3841* (MMNS)

Carex austrina (Small) Mack., PR, IF; *Bryson et al.* (1992)

Carex basiantha Steud., BP, PR, mesophytic upland hardwood forests, prairies, O/C(I); 1530, *Bryson 3210*, 3217, *McDaniel 31053*, *Morris et al.* (1993)

Carex blanda Dewey, BP, PR, bottomland hardwood forests, mesophytic upland hardwood

forests, xeric upland hardwood forests, O; 191, 1355, *Bryson 416*, 2880a, 2880b, 3215, *Morris et al.* (1993)

Carex brevior (Dewey) Mack. ex Lunell, BP, IF, pine forests, roadsides, O; 225, *Bryson 5391*, 8600, *Bryson et al.* (1992)

Carex bushii Mack., BP, xeric upland hardwood forests, prairie cedar woodlands, C(I); *Bryson 31*, *McDaniel 10524*

Carex caroliniana Schwein., IF, bottomland hardwood forests, roadsides, A(I); 262, *Bryson 92*

Carex cephalophora Muhl. ex Willd., BP, PR, IF, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, prairies, rivers/creeks (riparian-banks), urban areas, O/C; 221, *Bryson 19*, 40, 42, 98, 139, 346, 350, 1337a, 2877, 3214, *McDaniel 1818*, 2439, *Morris et al.* (1993)

Carex cherokeensis Schwein., BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairies, prairie cedar woodlands, AA(I); 5, 107, *Bryson 5*, 6, 13, 16, 20, 26, 27, 34, 126, 352, *Bryson* (1980), *Leidolf and McDaniel* (1998), *McDaniel 1816*, *Schuster 9*, *Morris et al.* (1993)

Carex complanata Torr. & Hook., PR, IF, mesophytic upland hardwood forests, pine forests, canals/drainage ditches (riparian-banks), roadsides, C; 237, 240, 1335a, 1476, *Bryson 148*, 3141

Carex corrugata Fernald, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 190, 229, 1520a, *Bryson 93* (ctb), 622 (ctb), 3059 (ctb), 3827 (ctb), 5631 (ctb), 5635 (ctb), 5641 (ctb)

Carex crebriflora Wiegand, IF, bottomland hardwood forests, pine-mixed hardwood forests; *Bryson 675*, 3063, 3200, 3656, *Rosenkranz s.n.*

Carex crus-corvi Shuttlew. ex Kuntze, IF; *Bryson 288*

Carex debilis Michx., IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine-mixed hardwood forests, O; 1302, *Bryson 376*, 3139, *Theriot et al.* (1993)

Carex digitalis Willd. var. *macropoda* Fernald [= *C. digitalis* Willd.], IF; *Bryson 373* (ctb), 377 (ctb)

Carex festucacea Schkuhr ex Willd., BP, IF, bottomland hardwood forests, pine forests, canals/drainage ditches (riparian-banks), grass/forb meadows, roadsides, O; *Leidolf pers. obs.*, *Brooks 131*, *Bryson 282*, 366, 3191

- Carex flaccosperma* Dewey, BP, IF, bottomland hardwood forests, swamp forests, mesophytic upland hardwood forests, pine forests, canals/drainage ditches (emergent), C; 247, 1295, 1299, 1309, 1478, 1523a, Brooks 127, Bryson 17, 100, 128, 147, 155, 309, 429 (ctb), 964 (ctb), 1853 (ctb), 3060 (ctb), 3071, 3209 (ctb), 3829 (ctb), McDaniel 1675, 2438, Theriot et al. (1993)
- Carex frankii* Kunth, BP, PR, IF, bottomland hardwood forests, lakes/ponds/impoundments (littoral-emergent), canals/drainage ditches (emergent), seepage areas, roadsides, C; 384, 575, 1493, 1559, 1571, 1591, Bryson 283, 286, Morris et al. (1993), Wigley 314017
- Carex glaucodea* Tuck. ex Olney [= *C. flaccosperma* Dewey var. *glaucodea* (Tuck. ex Olney) Kuek.], BP; Bryson 11671 (ctb), Morris et al. (1993)
- Carex gracilescens* Steud., BP, PR, IF, mesophytic upland hardwood forests, A(l), **S2S3**; McDaniel 31021, Morris et al. (1993)
- Carex granularis* Muhl. ex Willd., BP, prairies, O/C(l); 1529, Bryson 135, McDaniel 31432, Morris et al. (1993)
- Carex hirsutella* Mack., BP, IF, prairies; Brooks 138, McDaniel 11621
- Carex hyalinolepis* Steud., IF, canals/drainage ditches (emergent); Bryson 285, 1860, Lowe (1921)
- Carex intumescens* Rudge, IF, bottomland hardwood forests, swamp forests, A(l); 473, 1376, Bryson 90, Theriot et al. (1993)
- Carex jamesii* Schwein., BP, PR, mesophytic upland hardwood forests, prairies, R, **S1S2**; 1531, McDaniel 31375, Morris et al. (1993), Naczi and Bryson (1990)
- Carex jorii* L.H. Bailey, IF, bottomland hardwood forests, swamp forests, canals/drainage ditches (emergent), O; 912, Bryson 304, 3440
- Carex laevivaginata* (Kük.) Mack., PR, seepage areas; Bryson 3839 (ctb)
- Carex laxiflora* Lam. var. *serrulata* F.J. Herm., PR, mesophytic upland hardwood forests, R, **S1**; 1334a, Morris et al. (1993)
- Carex leavenworthii* Dewey, BP, PR, IF, bottomland hardwood forests, roadsides, C; 196, 228, Morris et al. (1993)
- Carex longii* Mack., IF, bottomland hardwood forests; Bryson 153 (ctb), 282 (ctb), 623 (ctb), 707, 2029 (ctb), 3069 (ctb), 3431 (ctb), 7013 (ctb), 8608 (ctb), 8610 (ctb)
- Carex louisianica* L.H. Bailey, IF, bottomland hardwood forests, A(l); 456, 910 (R456), 1578 (R456)
- Carex lupulina* Muhl. ex Willd., IF, mesophytic upland hardwood forests, O; 558, 1579 (R558)
- Carex lurida* Wahlenb., IF, seepage areas, roadsides, O; 1479, Bryson 150
- Carex meadii* Dewey, BP, PR, prairies, O/C(l), **S3S4**; 1524a, Bryson 44, 59, 415, 1822 (ctb), 3143 (ctb), 3640 (ctb), 3644 (ctb), 3738 (ctb), 3825 (ctb), 4108 (ctb), 5402 (ctb), 11668 (ctb), Bryson (1980), Morris et al. (1993), Tracy 31 (MISSA)
- Carex microdonta* Torr. & Hook., BP, prairies, O, **S2?**; 1522, Bryson 11667 (ctb), Bryson (1980), Bryson et al. (1992)
- Carex molesta* Mack. ex Bright, BP, PR; Bryson et al. (1992)
- Carex muehlenbergii* Schkuhr ex Willd., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairies, canals/drainage ditches (riparian-banks), O/C(l); 172, 261, Bryson 4409, McDaniel 11620, Morris et al. (1993)
- Carex oxylepis* Torr. & Hook. var. *oxylepis*, BP, PR, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, O; Bryson 130, 353, 354 (ctb), 2881 (ctb), 3830 (ctb), 5637 (ctb), 5643 (ctb), 5644 (ctb)
- Carex oxylepis* Torr. & Hook. var. *pubescens* J.K. Underw., PR; Bryson 3218 (ctb), Bryson et al. (1992)
- Carex pigra* Naczi, BP, PR; Bryson 11672 (ctb), 12348 (ctb)
- Carex planispicata* Naczi, BP, PR, IF, mesophytic upland hardwood forests, rivers/creeks (riparian-banks), roadsides, O; 222, 1356 (R222), Bryson 24, 25, 93, 133, 2879, 3216
- Carex reniformis* (L.H. Bailey) Small, IF, bottomland hardwood forests, O/C; 246, McDaniel 1824
- Carex retroflexa* Muhl. ex Willd., PR, IF, mesophytic upland hardwood forests, pine forests, O; 192, Bryson 351
- Carex rosea* Schkuhr ex Willd., IF; Bryson 369 (ctb)
- Carex socialis* Mohlenbr. & Schwegman, BP, PR, IF, bottomland hardwood forests; Bryson 966 (MISSA), 5394, Tracy s.n. (MISSA)
- Carex squarrosa* L., IF; Bryson 284

- Carex striatula* Michx., PR, mesophytic upland hardwood forests, O; 1301
- Carex stricta* Lam., **S2**; Bryson (1980)
- Carex styloflexa* Buckley, PR, IF, mesophytic upland hardwood forests, pine-mixed hardwood forests, O; 193, Bryson 3055, 3137
- Carex triangularis* Boeck., BP, PR, IF, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, rivers/creeks (riparian-banks), canals/drainage ditches (riparian-banks), roadsides, O/C; 236, Bryson 23, 38, 39a, 91a, 132a, 156, 1859, 2028, Copeland s.n., McDaniel 1825
- Carex tribuloides* Wahlenb., IF, bottomland hardwood forests, rivers/creeks (riparian-banks), canals/drainage ditches (emergent), O; 358, 474, Bryson 676, 3072, Theriot et al. (1993)
- Carex typhina* Michx., IF, bottomland hardwood forests, O; 911
- Carex umbellata* Schkuhr ex Willd., BP, PR, xeric upland hardwood forests, roadsides, U; 1263, Bryson 5164, Naczi and Bryson (1990)
- Carex vulpinoidea* Michx., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)
- Cyperus acuminatus* Torr. & Hook. ex Torr., BP, canals/drainage ditches (emergent), C; 406, Bryson 10110, MacDonald 10887
- Cyperus compressus* L., PR, urban areas, O; 784, Bryson 2605, Copeland s.n., McDaniel 2206
- Cyperus croceus* Vahl, IF, pine forests, U; 876a, Bryson 698
- Cyperus echinatus* (L.) Wood, IF, grass/forb meadows, roadsides, C; 483, 506, 546, 661, McDaniel 2536, Wigley 314019
- Cyperus erythrorhizos* Muhl., IF, lakes/ponds/impoundments (riparian-mudflats), C; 981, Bryson 3439a, 3439b
- **Cyperus esculentus* L., BP, IF, cultivated fields, C; 709, 816, Bryson 3426
- Cyperus flavescens* L., PR, urban areas, U; 785
- **Cyperus iria* L., IF, lakes/ponds/impoundments (riparian-mudflats), C; 606, Bryson 345, 3428, Pullen et al. (1968b), Wigley 312059
- Cyperus odoratus* L., BP, IF, canals/drainage ditches (riparian-banks), urban areas, C; 623, 967, Bryson 3441, Carraway 179, McDaniel 31331
- Cyperus polystachyos* Rottb., IF, seepage areas, roadsides, O; 859
- Cyperus pseudovegetus* Steud., IF, rivers/creeks (riparian-banks), C; 357, Bruza 980, Bryson 689
- Cyperus retroflexus* Buckley, BP, cultivated fields; Bryson and Carter (1992)
- Cyperus retrorsus* Chapm., IF, grass/forb meadows, O; 662, Bryson 3437, Lowe (1921)
- **Cyperus rotundus* L., BP, IF, seepage areas, cultivated fields, C; 412, 540, 708, Bruza 957, Bryson 2135, 3427, Wigley 313036
- Cyperus strigosus* L., IF, canals/drainage ditches (riparian-banks), roadsides, C; 484, 550, Bruza 960, 961, Bryson 701, 3438, Lowe (1921), Wigley 315070
- Eleocharis compressa* Sull., BP; Bryson 3146 (ctb)
- Eleocharis elliptica* Kunth, BP; Bryson 1858 (ctb)
- Eleocharis montevidensis* Kunth, BP; Bryson 8920 (ctb)
- Eleocharis obtusa* (Willd.) Schult., BP, IF, canals/drainage ditches (emergent), C; 430, 814, 866, Bruza 959, Bryson 685, McDaniel 2539, Wigley 312060
- Eleocharis quadrangulata* (Michx.) Roem. & Schult., IF, lakes/ponds/impoundments (littoral-emergent), U; 601, Bruza 982, McDaniel 2550
- Eleocharis smallii* Britton, BP; McDaniel 25026
- Eleocharis tenuis* (Willd.) Schult., IF, canals/drainage ditches (emergent), O; 197
- Fimbristylis annua* (All.) Roem. & Schult., PR, IF, canals/drainage ditches (emergent), urban areas, O; 783, 862, McDaniel 2727
- Fimbristylis autumnalis* (L.) Roem. & Schult., IF, canals/drainage ditches (emergent), O; 860, 863, Bryson 2610, McDaniel 2728
- Fimbristylis decipiens* Kral, BP; MacDonald 10886
- Fimbristylis littoralis* Gaudich. [= *F. miliacea* (L.) Vahl], IF, canals/drainage ditches (emergent), O; 864
- Fimbristylis puberula* (Michx.) Vahl; Brooks 151
- Fimbristylis tomentosa* Vahl; Bruza 964
- Kyllinga brevifolia* Rottb., PR, urban areas, O; 786, McDaniel 7526
- Kyllinga odorata* Vahl, PR, IF, seepage areas, grass/forb meadows, urban areas, C; 546, 846, 965, 1560, Bryson 3434, Carraway 180
- Rhynchospora caduca* Elliott, IF, seepage areas, C(l); 491, McDaniel 2547
- Rhynchospora corniculata* (Lam.) A. Gray, IF, canals/drainage ditches (emergent), C; 442, Bruza 979
- Rhynchospora globularis* (Chapm.) Small; Brooks 490, Bruza 935, McDaniel 2639

- Rhynchospora glomerata* (L.) Vahl, IF, C; 1477
Rhynchospora inexpansa (Michx.) Vahl, IF, seepage areas, roadsides, C(I); 489, 490 (R489), 492 (R489), 1562
Scirpus atrovirens Willd., IF, canals/drainage ditches (emergent), roadsides, O; 509
Scirpus cyperinus (L.) Kunth, IF, lakes/ponds/impoundments (riparian–mudflats, littoral–emergent), O; 583
Scirpus koilolepis (Steud.) Gleason, IF, urban areas, A(I); 1313
Scirpus lineatus Michx.; Carter 3010
Scirpus pendulus Muhl., BP, canals/drainage ditches (emergent), O; 170
Scleria oligantha Michx., BP, prairies, R/O; 1521, McDaniel 1087

DIOSCOREACEAE

- Dioscorea villosa* L., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, U; 668, Jones (1976b), Phares s.n. (MISSA), Theriot et al. (1993)

HEMEROCALLIDACEAE

- **Hemerocallis fulva* (L.) L., BP, roadsides, urban areas, C; 317

HYACINTHACEAE

- Camassia scilloides* (Raf.) Cory, BP, grass/forb meadows, **S2S3**; Bryson 58, McDaniel 31379
 **Hyacinthoides nonscripta* (L.) Chouard ex Rothm., PR, urban areas, R; Askew 55
 **Muscari botryoides* (L.) Mill.; Easley s.n. (MISSA)
 **Muscari neglectum* Guss. ex Ten., PR, roadsides; Murphy s.n. (MISSA)

HYDROCHARITACEAE

- Limnobium spongia* (Bosc) Rich. ex Steud., IF, lakes/ponds/impoundments (littoral–rooted–floating); Stewart 123
Najas guadalupensis (Spreng.) Magnus, PR, canals/drainage ditches (submergent), O; 924
 **Najas minor* All., PR, lakes/ponds/impoundments (submergent); Nuttle pers. obs.

HYPOXIDACEAE

- Hypoxis hirsuta* (L.) Coville, BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, pine-mixed hardwood forests, prairies, roadsides, O/A(I); 173, 242, Arnett 91 (MISSA), Channell s.n. (MISSA), Locke s.n. (MISSA), McDaniel 2414

IRIDACEAE

- **Belamcanda chinensis* (L.) DC., PR, roadsides, U; Ray 104 (MISSA), Smith 1444
Iris virginica L., IF, canals/drainage ditches (emergent), O; 254
Nemastylis geminiflora Nutt., BP, prairies, chalk outcrops, C(I)/R, **S2**; 1510, McDaniel 31002, Morris 3094, Morris et al. (1993)
Sisyrinchium albidum Raf., BP, PR, prairies, chalk outcrops, C; 116, 148, Leidolf and McDaniel (1998), Morris et al. (1993)
Sisyrinchium angustifolium Mill., IF, bottomland hardwood forests, pine forests, O; 250, McDaniel 2440
Sisyrinchium atlanticum E.P. Bicknell, BP, PR, mesophytic upland hardwood forests, prairies, O; 166, 1330a, McDaniel 31024
Sisyrinchium mucronatum Michx., IF; Copeland s.n.
Sisyrinchium rosulatum E.P. Bicknell, IF, seepage areas, cultivated fields, urban areas, O/C; 499, 1468

JUNCACEAE

- Juncus acuminatus* Michx., BP, IF, rivers/creeks (emergent), canals/drainage ditches (emergent), O; Bryson 1854, McDaniel 25028
Juncus biflorus Ell., IF, pine-mixed hardwood forests, canals/drainage ditches (emergent), C/A; 362, Bryson 687, McDaniel 2538, 3149
Juncus brachycarpus Engelm., IF; Webster 1539
Juncus bufonius L., BP, PR, cultivated fields, C; 1469, Bryson 3289, 3501
Juncus coriaceus Mack., IF, canals/drainage ditches (emergent), C; 360, Bryson 1856
Juncus debilis A. Gray, IF, canals/drainage ditches (emergent), O; 865
Juncus dichotomus Elliott, IF, canals/drainage ditches (emergent); Bryson 1855
Juncus diffusissimus Buckley, IF, canals/drainage ditches (emergent), O; 451
Juncus effusus L., IF, canals/drainage ditches (emergent), O; 241
Juncus elliottii Chapm., IF, lakes/ponds/impoundments (riparian–mudflats); Bryson 686
Juncus filipendulus Buckley, BP, **S3S4**; Maddox 1146
Juncus marginatus Rostk., IF, canals/drainage ditches (emergent), O; 362, McDaniel 2538, 3149

Juncus nodatus Coville, IF, canals/drainage ditches (emergent), lakes/ponds/impoundments (littoral–emergent), U; 510, 656

Juncus scirpoides Lam., IF, canals/drainage ditches (emergent); Bruza 930

Juncus tenuis Willd., BP, PR, IF, mesophytic upland hardwood forests, xeric upland hardwood forests, pine forests, prairies, rivers/creeks (riparian–banks), canals/drainage ditches (emergent), urban areas, O/C; 378, 476, 1293, Bryson 8, 15, 699, 1682, 2027, Copeland s.n., Leidolf and McDaniel (1998)

Juncus torreyi Coville, BP, IF, prairies, canals/drainage ditches (emergent), cultivated fields, grass/forb meadows, C; 288, 383, Bryson 700, 2030, 3994, Leidolf and McDaniel (1998), McDaniel 31082

Juncus validus Coville, IF, bottomland hardwood forests, canals/drainage ditches (emergent), lakes/ponds/impoundments (riparian–mudflats, littoral–emergent), C; 361, Bruza 926, 972, Bryson 727

Luzula bulbosa (Alph. Wood) Smyth & Smyth, BP, IF, xeric upland hardwood forests, O; 1264, 1318

Luzula echinata (Small) F.J. Herm., PR, mesophytic upland hardwood forests, O; Morris et al. (1993)

LEMNACEAE

Spirodela polyrrhiza (L.) Schleid., PR, lakes/ponds/impoundments (littoral/profundal–free-floating), A(I); 925

LILIACEAE

Erythronium albidum Nutt., BP, xeric upland hardwood forests, C(I), **S2**; McDaniel 10369

Lilium michauxii Poir., PR, mesophytic upland hardwood forests, R; Morris 3093, Morris et al. (1993)

Lilium superbum L., PR, IF, bottomland hardwood forests, RR, **S3S4**; Leidolf s.n., Phares s.n., Theriot et al. (1993)

MELANTHIACEAE

Aletris aurea Walter, IF, pine forests, pine-mixed hardwood forests, seepage areas, roadsides, U/O; 501, 527 (R501), 564, Easley s.n. (MISSA), Jordan s.n. (MISSA), McDaniel 2638, McKays s.n. (MISSA), Ray 4844 (MISSA), 5213 (MISSA)

Aletris farinosa L., IF, pine-mixed hardwood forests; Ray 6248 (MISSA)

ORCHIDACEAE

Corallorrhiza wisteriana Conrad; Morris pers. obs.
Hexalectris spicata (Walter) Barnhart, PR, mesophytic upland hardwood forests, U; **S2**; Gordon 2032

Listera australis Lindl.; McDaniel pers. obs. (specimen extant)

Malaxis unifolia Michx.; McDaniel pers. obs.

Platanthera ciliaris (L.) Lindl., IF, pine forests, pine-mixed hardwood forests, canals/drainage ditches (riparian–banks), R/A(I); 591, Bennett s.n., McDaniel 2637, Ray 4756 (MISSA), 4845 (MISSA), 5215 (MISSA), Smith 1442

Platanthera clavellata (Michx.) Luer, IF, pine-mixed hardwood forests; Ray 4818 (MISSA)

Platanthera cristata (Michx.) Lindl., IF, seepage areas, A(I), **S3**; 526, Ray 5258 (MISSA)

Ponthieva racemosa (Walter) C. Mohr, BP, prairie cedar woodlands, RR, **S2?**; 926, Leidolf and McDaniel (1998)

Spiranthes cernua (L.) Rich., IF, seepage areas, O; 966, Morris (1989)

Spiranthes lacera (Raf.) Raf., BP, xeric upland hardwood forests, RR, **S3S4**; 937

Spiranthes magnicamporum Sheviak, BP, prairies, roadsides, AA(I), **S2S3**; 1002, 1006, 1010, Hare s.n. (MISSA), Leidolf and McDaniel (1998), Morris (1989), Ray s.n. (MISSA)

Spiranthes ovalis Lindl., IF, bottomland hardwood forests, RR, **S2S3**; 970

Spiranthes praecox (Walter) S. Watson, IF, lakes/ponds/impoundments (riparian–banks), seepage areas, O; 1480, Morris (1989), Patts 87 (MISSA), Tracy s.n. (MISSA)

Spiranthes tuberosa Raf., IF, pine forests, pine-mixed hardwood forests, U; 876, Ewing s.n. (MISSA), Morris (1989), Ray 4848a (MISSA)

Spiranthes vernalis Engelm. & A. Gray, IF, pine-mixed hardwood forests, lakes/ponds/impoundments (riparian–banks), seepage areas, grass/forb meadows, roadsides, O/C; 321, Hollimon s.n. (MISSA), Miles s.n. (MISSA), Morris (1989), Ray 6244 (MISSA)

Tipularia discolor (Pursh) Nutt., PR, mesophytic upland hardwood forests, U; 667, 1216 (R667)

Triphora trianthophora (Sw.) Rydb., IF, bottomland hardwood forests, O/C(I), **S2S3**; 976, Leidolf s.n., Theriot et al. (1993)

POACEAE (GRAMINEAE)

- Agrostis hiemalis* (Walter) Britton, Sterns & Poggenb., IF, seepage areas, cultivated fields, C; 1467, 1500, Barkworth et al. (In preparation), Brooks 134, Lowe (1921)
- Agrostis perennans* (Walter) Tuck., BP, IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 941, 950, Lowe (1921), Theriot et al. (1993)
- **Aira caryophyllea* L. var. *capillaris* (Host) Mutel [= *A. elegans* Willd. ex Gaudin], IF, roadsides, O; 1484, McDaniel 3007
- Alopecurus carolinianus* Walter; Askew 33, Bryson 3489
- Andropogon gerardii* Vitman, IF, pine forests, C; 918, Bryson (1980), Lowe (1921)
- Andropogon glomeratus* (Walter) Britton, Sterns & Poggenb., BP, prairies, C; 995, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), Lowe (1921), Morris et al. (1993), Wigley 314108
- Andropogon virginicus* L. var. *virginicus*, BP, prairies, C; 1018, Barkworth et al. (In preparation), Bryson (1980), Leidolf and McDaniel (1998), Lowe (1921), Morris et al. (1993)
- Aristida dichotoma* Michx.; Barkworth et al. (In preparation), McDaniel 22200
- Aristida longespica* Poir. in Lam. var. *longespica*, BP, prairies, O; 787, Leidolf and McDaniel (1998), Lowe (1921)
- Aristida oligantha* Michx., BP, prairies, roadsides, O; 851, 1599b, Barkworth et al. (In preparation), MacDonald 18
- Arundinaria gigantea* (Walter) Muhl., PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, A(I); 977, 1369 (R977), Barkworth et al. (In preparation), Brooks 590, Laird 21, Morris et al. (1993), Theriot et al. (1993)
- Axonopus fissifolius* (Raddi) Kuhl. [= *A. affinis* Chase], IF, urban areas, C; 511, Barkworth et al. (In preparation)
- Bothriochloa barbinodis* (Lag.) Herter; Barkworth et al. (In preparation)
- **Bothriochloa ischaemum* (L.) Keng; Barkworth et al. (In preparation)
- Bothriochloa laguroides* (DC.) Pilger in Engler ssp. *torreyana* (Steud.) Allred & Gould [= *Andropogon saccharoides* Sw.], BP, prairies, C; 436, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), Morris et al. (1993), Pullen et al. (1968b), Wigley 315065
- **Bothriochloa pertusa* (L.) A. Camus [= *Andropogon pertusus* (L.) Willd.], BP, PR, roadsides, O; 1001, Allison 8016, McDaniel 14669, Morris et al. (1993), Stewart 167, Wigley 313107
- Bouteloua curtipendula* (Michx.) Torr. in Marcy, BP, prairies, A(I), **S3S4**; 616, Barkworth et al. (In preparation), Bryson (1980), Leidolf and McDaniel (1998), Lowe (1921), Morris et al. (1993)
- **Briza minor* L., BP, roadsides, O; 1460, Barkworth et al. (In preparation)
- **Bromus japonicus* Thunb. in Murray, BP, prairies, A(I); 1523, Barkworth et al. (In preparation), Leidolf and McDaniel (1998)
- **Bromus tectorum* L., BP, roadsides, A(I); 1338, Barkworth et al. (In preparation)
- Chasmanthium latifolium* (Michx.) H.O. Yates, BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, C; 390, Barkworth et al. (In preparation), Lowe (1921), Morris et al. (1993), Theriot et al. (1993)
- Chasmanthium ornythorhynchum* Nees; Barkworth et al. (In preparation)
- Chasmanthium sessiliflorum* (Poir.) H.O. Yates, IF, bottomland hardwood forests, mesophytic upland hardwood forests, xeric upland hardwood forests, C; 453, 640, 1547, Barkworth et al. (In preparation), Bruza 965, Clonts 541, Lowe (1921), Theriot et al. (1993)
- **Chloris pectinata* Benth.; Barkworth et al. (In preparation)
- Cinna arundinacea* L., IF, bottomland hardwood forests, lakes/ponds/impoundments (riparian-mudflats), O; 633, Theriot et al. (1993)
- Coelorachis cylindrica* (Michx.) Nash, **S1**; Barkworth et al. (In preparation)
- **Cynodon dactylon* (L.) Pers., BP, cultivated fields, O; 421, Barkworth et al. (In preparation), Bryson 3421, Lowe (1921)
- **Dactylis glomerata* L., BP, prairies, A(I); 1524, Barkworth et al. (In preparation)
- **Dactyloctenium aegyptium* (L.) Willd.; Barkworth et al. (In preparation), Lowe (1921)
- Dichanthelium aciculare* (Desv. ex Poir. in Lam.) Gould & C.A. Clark ssp. *aciculare*; Barkworth et al. (In preparation)
- Dichanthelium aciculare* (Desv. ex Poir. in Lam.) Gould & C.A. Clark ssp. *angustifolium* (Elliott)

- Freckmann & Lelong in ed.; Barkworth et al. (In preparation)
- Dichanthelium aciculare* (Desv. ex Poir. in Lam.) Gould & C.A. Clark ssp. *neuranthum* (Griseb.) Freckmann & Lelong in ed., IF, lakes/ponds/impoundments (riparian–mudflats), O; 703
- Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *fasciculatum* (Torr.) Freckmann & Lelong in ed.; Barkworth et al. (In preparation)
- Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *implicatum* (Scribn.) Freckmann & Lelong in ed., IF, seepage areas, roadsides; 494
- Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *lindheimeri* (Nash) Freckmann & Lelong in ed., IF, bottomland hardwood forests, pine forests, urban areas, O; 514; Barkworth et al. (In preparation), *McDaniel* 13491, Theriot et al. (1993)
- Dichanthelium boscii* (Poir.) Gould & C.A. Clark, PR, IF, mesophytic upland hardwood forests, xeric upland hardwood forests, C; 459, 639, Barkworth et al. (In preparation), Morris et al. (1993)
- Dichanthelium clandestinum* (L.) Gould; Barkworth et al. (In preparation)
- Dichanthelium commutatum* (Schult.) Gould ssp. *commutatum*; Barkworth et al. (In preparation), Lowe (1921)
- Dichanthelium commutatum* (Schult.) Gould ssp. *joorii* (Vasey) Freckmann & Lelong in ed., PR, IF, bottomland hardwood forests, rivers/creeks (riparian–banks), O; 669
- Dichanthelium consanguineum* (Kunth) Gould & C.A. Clark, IF, roadsides, O; 861
- Dichanthelium depauperatum* (Muhl.) Gould, BP, IF, xeric upland hardwood forests, pine forests, prairies, O; 1358, 1522a, Barkworth et al. (In preparation), *McDaniel* 1086, 13490
- Dichanthelium dichotomum* (L.) Gould ssp. *dichotomum*; Barkworth et al. (In preparation), Lowe (1921)
- Dichanthelium dichotomum* (L.) Gould ssp. *microcarpon* (Muhl. ex Elliott) Freckmann & Lelong in ed. [= *P. microcarpon* Muhl. ex Elliott], IF, bottomland hardwood forests, mesophytic upland hardwood forests, O; 455, Barkworth et al. (In preparation), Theriot et al. (1993)
- Dichanthelium dichotomum* (L.) Gould ssp. *nitidum* (Lam.) Freckmann & Lelong in ed.; Barkworth et al. (In preparation), Lowe (1921)
- Dichanthelium laxiflorum* (Lam.) Gould, BP, PR, IF, pine forests, pine-mixed hardwood forests, prairies, roadsides, C; 429, 592, 1366a, Barkworth et al. (In preparation), Lowe (1921), *McDaniel* 9798
- Dichanthelium oligosanthos* (Schult.) Gould ssp. *oligosanthos*; Barkworth et al. (In preparation)
- Dichanthelium oligosanthos* (Schult.) Gould ssp. *scribnerianum* (Nash) Freckmann & Lelong in ed., BP, xeric upland hardwood forests, O; Barkworth et al. (In preparation), *McDaniel* 1500
- Dichanthelium ovale* (Elliott) Gould & C.A. Clark ssp. *villosissimum* (Nash) Freckmann & Lelong in ed.; Barkworth et al. (In preparation)
- Dichanthelium polyanthes* (Schult.) Mohlenbr., IF, mesophytic upland hardwood forests, canals/drainage ditches (riparian–banks), O; 458, 572, Barkworth et al. (In preparation)
- Dichanthelium ravenelii* (Scribn. & Merr.) Gould, BP, canals/drainage ditches (riparian–banks), O; 171, Barkworth et al. (In preparation),
- Dichanthelium scabriusculum* (Elliott) Gould & C.A. Clark, BP, chalk outcrops, urban areas, R/O; Barkworth et al. (In preparation), *McDaniel* 22194, 31045
- Dichanthelium scoparium* (Lam.) Gould, IF, grass/forb meadows, C; 493, Barkworth et al. (In preparation), Lowe (1921)
- Dichanthelium sphaerocarpon* (Elliott) Gould, IF, canals/drainage ditches (riparian–banks), O; 571, Barkworth et al. (In preparation), Lowe (1921)
- Digitaria ciliaris* (Retz.) Koeler var. *ciliaris*, BP, cultivated fields, A(I); 403, Barkworth et al. (In preparation)
- Digitaria filiformis* (L.) Koeler; Barkworth et al. (In preparation), *Brooks* 492, Lowe (1921)
- **Digitaria ischaemum* (Schreb.) Muhl., BP, prairies, A(I); 994, Barkworth et al. (In preparation), *Copeland s.n.*, Lowe (1921)
- **Digitaria violascens* Link; Barkworth et al. (In preparation)
- **Echinochloa colona* (L.) Link, BP, cultivated fields, C; 402, Barkworth et al. (In preparation), Lowe (1921), *MacDonald* 1, *Wigley* 312053
- **Echinochloa crusgalli* (L.) P. Beauv.; Barkworth et al. (In preparation), *Wigley* 312054

- **Echinochloa esculenta* (A. Braun) H. Scholtz; Barkworth et al. (In preparation)
- **Echinochloa muricata* (P. Beauv.) Fernald, BP, cultivated fields, O; 413, Barkworth et al. (In preparation)
- **Eleusine indica* (L.) Gaertn., BP, roadsides, C(I); 681, Barkworth et al. (In preparation), Bryson 3425, Lowe (1921), Wigley 313005
- Elymus glabriflorus* (Vasey ex L.H. Dewey) Scribn. & C.R. Ball var. *glabriflorus*; Barkworth et al. (In preparation)
- Elymus villosus* Muhl. var. *villosus*; Barkworth et al. (In preparation)
- Elymus virginicus* L., BP, PR, IF, bottomland hardwood forests, roadsides, C(I); 385, 549, Barkworth et al. (In preparation), Lowe (1921), MacDonald 24, Morris et al. (1993)
- Eragrostis capillaris* (L.) Nees in Mart., BP, prairies, prairie cedar woodlands, C; 795, 825, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), McDaniel 15510, 22168
- Eragrostis frankii* C.A. Mey. ex Steud.; Barkworth et al. (In preparation), Lowe (1921)
- Eragrostis hirsuta* (Michx.) Nees, BP, chalk outcrops, R; Barkworth et al. (In preparation), McDaniel 22931 (MMNS)
- Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb.; Lowe (1921), McDaniel 33287
- Eragrostis intermedia* Hitchc.; Barkworth et al. (In preparation)
- Eragrostis japonica* (Thunb.) Trin. [= *E. glomerata* (Walter) L.H. Dewey]; Lowe (1921), McDaniel 33290, 33296
- Eragrostis pectinacea* (Michx.) Nees; Barkworth et al. (In preparation), Lowe (1921)
- Eragrostis pilosa* (L.) P. Beauv.; Barkworth et al. (In preparation)
- Eragrostis refracta* (Muhl. ex Elliott) Scribn., IF, lakes/ponds/impoundments (riparian-banks), O; 696, Barkworth et al. (In preparation), Lowe (1921), McDaniel 2730
- Eragrostis spectabilis* (Pursh) Steud., IF, grass/forb meadows; 633, Barkworth et al. (In preparation)
- Eragrostis trichodes* (Nutt.) Alph. Wood; Barkworth et al. (In preparation)
- Eriochloa acuminata* (J. Presl) Kunth [= *E. gracilis* (E. Fourn.) Hitchc.]; Barkworth et al. (In preparation), McDaniel 2207
- Eriochloa aristata* Vasey; Barkworth et al. (In preparation), Lowe (1921)
- **Glyceria declinata* Bréb., IF, grass/forb meadows, U; 1344, Barkworth et al. (In preparation)
- Glyceria striata* (Lam.) Hitchc., BP, prairies, O; 1516, Barkworth et al. (In preparation)
- Gymnopogon ambiguus* (Michx.) Britton, Sterns & Poggenb.; Barkworth et al. (In preparation), Lowe (1921)
- Gymnopogon brevifolius* Trin.; Barkworth et al. (In preparation), Lowe (1921), McDaniel 26518
- Hordeum pusillum* Nutt., BP, urban areas, O; 1456, Barkworth et al. (In preparation), Bryson 3487
- **Imperata cylindrica* (L.) Raeusch., BP, roadsides, C(I); 1507, Barkworth et al. (In preparation)
- Leersia lenticularis* Michx., IF, bottomland hardwood forests, swamp forests, O; 909
- Leersia oryzoides* (L.) Sw., IF, bottomland hardwood forests; Barkworth et al. (In preparation), Lowe (1921), McDaniel 33292, Theriot et al. (1993)
- Leersia virginica* Willd., IF, bottomland hardwood forests, rivers/creeks (riparian-banks), O; 689, Lowe (1921), MacDonald 23, Theriot et al. (1993)
- Leptochloa panicea* (Retz.) Ohwi ssp. *brachiata* (Steud.) N. Snow, BP, canals/drainage ditches (riparian-banks), O; 801, Barkworth et al. (In preparation)
- Leptochloa panicoides* (J. Presl) Hitchc., IF, lakes/ponds/impoundments (riparian-banks), A(I); 605, Barkworth et al. (In preparation)
- **Lolium multiflorum* Lam., BP, cultivated fields, C; 414, Lowe (1921)
- Melica mutica* Walter, PR, IF, mesophytic upland hardwood forests, O; 1300, 1310, Barkworth et al. (In preparation), Lowe (1921)
- **Miscanthus sinensis* Andersson, Barkworth et al. (In preparation), Mathies 864
- Muhlenbergia glabriflora* Scribn., IF, bottomland hardwood forests, canals/drainage ditches (riparian-banks), U **S?**; Leidolf s.n., Theriot et al. (1993)
- Nassella leucotricha* (Trin. & Rupr.) R.W. Pohl; Barkworth et al. (In preparation)
- Nassella viridula* (Trin.) Barkworth; Barkworth et al. (In preparation)
- Panicum anceps* Michx. ssp. *anceps*, IF, mesophytic upland hardwood forests, O; 454, 552 (R454), Barkworth et al. (In preparation)
- Panicum capillare* L. ssp. *capillare*, BP, cultivated

- fields, roadsides, C; 411, 629, Barkworth et al. (In preparation)
- Panicum dichotomiflorum* Michx. ssp. *dichotomiflorum*, BP, roadsides, O; 892, Barkworth et al. (In preparation)
- Panicum flexile* (Gatt.) Scribn. in Kearney, BP, prairie cedar woodlands, O; 826, Barkworth et al. (In preparation), Lowe (1921)
- Panicum rigidulum* Bosc ex Nees in Mart. ssp. *pubescens* (Vasey) Freckmann & Lelong in ed., IF, bottomland hardwood forests, lakes/ponds/impoundments (riparian-banks), A(I); 602
- Panicum rigidulum* Bosc ex Nees in Mart. ssp. *rigidulum*; Barkworth et al. (In preparation), Lowe (1921)
- Panicum verrucosum* Muhl.; Barkworth et al. (In preparation), Lowe (1921), *McDaniel* 33288
- Panicum virgatum* L., BP, IF, prairies, seepage areas, C; 590, 617, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), Lowe (1921)
- Paspalum bifidum* (A. Bertol.) Nash; Barkworth et al. (In preparation), Lowe (1921)
- Paspalum boscianum* Flüggé; Barkworth et al. (In preparation), Lowe (1921), *Wigley* 312056
- Paspalum conjugatum* P.J. Bergius; Barkworth et al. (In preparation)
- **Paspalum dilatatum* Poir. in Lam., BP, prairies, cultivated fields, C; 382, 419, Barkworth et al. (In preparation), *MacDonald* 16
- Paspalum distichum* L., IF, lakes/ponds/impoundments (riparian-mudflats), U; 632, Barkworth et al. (In preparation), Lowe (1921)
- Paspalum floridanum* Michx., BP, IF, prairies, seepage areas, roadsides, C; 488, Barkworth et al. (In preparation), *Carraway* 177, *Clonts* 1401, Leidolf and McDaniel (1998), Lowe (1921)
- Paspalum laeve* Michx., IF, seepage areas, roadsides, C; 487, Barkworth et al. (In preparation), Lowe (1921), *McDaniel* 2729
- **Paspalum notatum* Flüggé, BP, roadsides, C; 401, Barkworth et al. (In preparation), *Wigley* 314024
- Paspalum paniculatum* L.; Barkworth et al. (In preparation)
- Paspalum praecox* Walter; Barkworth et al. (In preparation), Lowe (1921)
- Paspalum pubiflorum* Rupr. ex E. Fourn., BP, cultivated fields, U; 818, Barkworth et al. (In preparation), *McDaniel* 2265
- **Paspalum racemosum* Lam.; Barkworth et al. (In preparation)
- Paspalum repens* P.J. Bergius, IF, bottomland hardwood forests, rivers/creeks (riparian-banks), O; Barkworth et al. (In preparation), *Leidolf s.n.*, *McDaniel* 33289, 33293, Theriot et al. (1993)
- Paspalum setaceum* Michx. var. *ciliatifolium* (Michx.) Vasey; Barkworth et al. (In preparation)
- **Paspalum urvillei* Steud., IF, seepage areas, roadsides, C; 486, Barkworth et al. (In preparation), *Brooks* 476, *Webster* 277, *Wigley* 314026
- **Pennisetum ciliare* (L.) Link; Barkworth et al. (In preparation)
- **Pennisetum setigerum* (Vahl) Wipff; Barkworth et al. (In preparation)
- Phalaris caroliniana* Walter, BP, prairies, O; 1364, *Brooks* 126, *Wigley* 313006
- **Phyllostachys aureosulcata* McClure; *MacDonald* 1368
- **Phyllostachys flexuosa* Rivière & C. Rivière, IF, lakes/ponds/impoundments (riparian-banks), A(I); 869, *MacDonald* 1369
- **Phyllostachys meyeri* McClure, PR, IF, lakes/ponds/impoundments (riparian-banks), roadsides, A(I); 723, 845, *MacDonald* 1371
- **Poa annua* L., BP, cultivated fields, urban areas, C; 1265, 1280, Barkworth et al. (In preparation), *Bryson* 349, Lowe (1921)
- Poa arachnifera* Torr.; Barkworth et al. (In preparation), Lowe (1921)
- Poa autumnalis* Muhl. ex Elliott, PR, mesophytic upland hardwood forests, C; 1336a, 1354, Barkworth et al. (In preparation), Lowe (1921)
- Poa chapmaniana* Scribn.; Barkworth et al. (In preparation), Lowe (1921)
- **Poa pratensis* L., PR, urban areas, C; Leidolf pers. obs., Lowe (1921)
- Saccharum brevibarbe* (Michx.) Pers. var. *brevibarbe*; Barkworth et al. (In preparation), Lowe (1921)
- Saccharum brevibarbe* (Michx.) Pers. var. *contortum* (Elliott) R.D. Webster [= *Erianthus contortus* Elliott], IF, pine forests, C; 988, Lowe (1921)
- Saccharum giganteum* (Walter) Pers. [= *Erianthus giganteus* (Walter) F.T. Hubb.], IF, pine forests, C; 916, Barkworth et al. (In preparation), Lowe (1921)
- **Schedonorus arundinaceus* (Schreber) Dumort.

- [= *Lolium arundinaceum* (Schreber) Darbysh., *Festuca elatior* L.]—BP, PR, bottomland hardwood forests, cultivated fields, O; 418, Morris et al. (1993)
- Schizachyrium scoparium* (Michx.) Nash in Small var. *scoparium*, BP, IF, pine forests, prairies, C; 917, Barkworth et al. (In preparation), Leidolf and McDaniel (1998)
- **Setaria faberi* R.A.W. Herrm. in F. Rosen, BP, cultivated fields, O; 898
- Setaria parviflora* (Poir.) Kerguelen [= *S. geniculata* auct. non Willd.], BP, IF, prairies, roadsides, C; 386, 543, Barkworth et al. (In preparation), Leidolf and McDaniel (1998)
- **Setaria pumila* (Poir.) Roem. & Schult. ssp. *pumila* [= *S. glauca* (L.) P. Beauv.], IF, roadsides, C; 542, Barkworth et al. (In preparation)
- Sorghastrum nutans* (L.) Nash in Small, IF, pine forests, O; 987, Barkworth et al. (In preparation)
- **Sorghum* × *almum* Parodi, BP, cultivated fields, U; 817, Barkworth et al. (In preparation)
- **Sorghum halepense* (L.) Pers., BP, PR, bottomland hardwood forests, prairies, cultivated fields, roadsides, A; 380, 420, Barkworth et al. (In preparation), MacDonald 9, Morris et al. (1993), Wigley 313063
- Sphenopholis intermedia* (Rydb.) Rydb., IF, bottomland hardwood forests, O; 1375
- Sphenopholis obtusata* (Michx.) Scribn., PR, urban areas, O; 1324a, Lowe (1921), McDaniel 1830
- Sporobolus clandestinus* (Biehler) Hitchc.; Barkworth et al. (In preparation)
- Sporobolus compositus* (Poir.) Merr. var. *compositus* [= *S. asper* (Michx.) Kunth]; Lowe (1921), McDaniel 22169
- Sporobolus compositus* (Poir.) Merr. var. *drummondii* (Trin.) Kartesz & Gandhi; Barkworth et al. (In preparation)
- Sporobolus compositus* (Poir.) Merr. var. *macer* (Trin.) Kartesz & Gandhi; Barkworth et al. (In preparation)
- Sporobolus cryptandrus* (Torr.) A. Gray; Barkworth et al. (In preparation), Lowe (1921)
- **Sporobolus indicus* (L.) R. Br. [= *S. poiretii* (Roem. & Schult.) Hitchc.], BP, IF, xeric upland hardwood forests, prairies, C; 618, 1548, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), Lowe (1921)
- Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood, BP, prairies, O; 1017, Barkworth et al. (In preparation), Leidolf and McDaniel (1998), Lowe (1921), McDaniel 31318, 31320
- Steinchisma hians* (Elliott) Nash in Small, IF, urban areas, O; 513, Barkworth et al. (In preparation)
- Tridens flavus* (L.) Hitchc. var. *flavus*, PR, IF, bottomland hardwood forests, roadsides, C; 541, Barkworth et al. (In preparation), Copeland s.n., Lowe (1921), Morris et al. (1993), Wigley 314022
- Tridens strictus* (Nutt.) Nash in Small, IF, roadsides, C; 568, Barkworth et al. (In preparation), Copeland s.n., Lowe (1921), Wigley 312057
- Tripsacum dactyloides* (L.) L., IF, roadsides, O; 548, Barkworth et al. (In preparation), Carraway 181, Lowe (1921), Snow 66
- **Trisetum flavescens* (L.) P. Beauv.; Barkworth et al. (In preparation)
- Urochloa platyphylla* (Munro ex Wright) R.D. Webster [= *Brachiaria platyphylla* (Griseb.) Nash in Small], BP, cultivated fields, A(I); 891, Barkworth et al. (In preparation), Wigley 312052
- Urochloa ramosa* (L.) T.Q. Nguyen [= *Panicum ramosum* L.], PR, IF, canals/drainage ditches (riparian—banks), roadsides, urban areas, O/A(I); 567, Barkworth et al. (In preparation), McDaniel 2204
- Urochloa texana* (Buckley) R.D. Webster; Barkworth et al. (In preparation)
- Vulpia octoflora* (Walter) Rydb. var. *octoflora* [= *Festuca octoflora* Walter]; Brooks s.n., Lowe (1921)

POTAMOGETONACEAE

- Potamogeton diversifolius* Raf., lakes/ponds/impoundments (littoral—rooted—floating); Channell s.n. (MISSA), Jones (1974a), McDaniel pers. obs. (specimen extant)
- Potamogeton nodosus* Poir., IF, lakes/ponds/impoundments (littoral—rooted—floating), C(I); Bruza 983

SMILACACEAE

- Smilax bona-nox* L., BP, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, prairie cedar woodlands, chalk outcrops, O/C; Easley s.n. (MISSA), Leidolf s.n.,

- Leidolf and McDaniel (1998), Lowe (1921), Morris et al. (1993), *Ray 100* (MISSA), 6749 (MISSA), Theriot et al. (1993), *Tracy s.n.* (MISSA)
- Smilax glauca* Walter, IF, bottomland hardwood forests, pine-mixed hardwood forests, C; Lowe (1921), *Ray 6781* (MISSA), Theriot et al. (1993)
- Smilax lasioneura* Hook., BP, PR, mesophytic upland hardwood forests, xeric upland hardwood forests, C; *Easley s.n.* (MISSA), *Morris 3092*, *Persons s.n.* (MISSA), *Ray 6722* (MISSA), 8059 (MISSA)
- Smilax pulverulenta* Michx., PR, mesophytic upland hardwood forests, O; 220, *Easley s.n.* (MISSA), Lowe (1921), *McDaniel 28154*, Morris et al. (1993)
- Smilax rotundifolia* L., BP, PR, IF, bottomland hardwood forests, pine forests, pine-mixed hardwood forests, prairies, C; 232, 1320, *Askew 62*, 68, Leidolf and McDaniel (1998), Lowe (1921), *McDaniel 1676*, 31028, Morris et al. (1993), *Price s.n.* (MISSA), Theriot et al. (1993)
- Smilax smallii* Morong, IF, bottomland hardwood forests; *Leidolf s.n.*, Theriot et al. (1993)
- Smilax tamnoides* L., BP, IF, bottomland hardwood forests; *Ray 100* (MISSA), Theriot et al. (1993)

TRILLIACEAE

- Trillium cuneatum* Raf., IF, bottomland hardwood forests; *Blocker s.n.* (MISSA)
- Trillium recurvatum* L.C. Beck, PR, IF, bottomland hardwood forests, mesophytic upland hardwood forests, R/C; 96, 149 (*R96*), 1261 (*R96*), *Channell s.n.* (MISSA), *Easley s.n.* (MISSA), *Fletcher s.n.* (MISSA), Morris et al. (1993), *Persons s.n.* (MISSA), *Smith 1935*

TYPHACEAE

- **Typha angustifolia* L., BP, canals/drainage ditches (emergent), A(I); *McDaniel 31081*
- Typha latifolia* L., BP, IF, canals/drainage ditches (emergent), A(I); 315, 603, 1569

XYRIDACEAE

- Xyris torta* Small, IF, pine forests, canals/drainage ditches (emergent), seepage areas, R/U; 480, 525, 1558, *McDaniel 2640*, *Smith 1443*

ZANNICHELLIACEAE

- Zannichellia palustris* L., IF, lakes/ponds/impoundments (littoral-submergent); Jones (1974a), *Ray s.n.* (MISSA)

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